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BALTIMORE, JULY 28, 1910.

BEARS LOOSE!

And now, through Federal Govern-
ment channels of publicity, begin to flow
the annual streams of optimism about
the prospects of the cotton crop—in for-
eign lands.

BLUE AND GREEN.

Wall Street is the only blue spot. The rest
of the country is all right, as is demon-
strated in the statements made through the
Herald by men conspicuous in banking, in-
dustrial and commercial activities in every
part of the land.—*New York Herald*.

Wall Street's blueness is probably the
result of Wall Street's discovery that
the country's greenness as to Wall
Street is passing.

FOR GOOD ROADS.

Solon Jacobs & Co., Birmingham, Ala.,
write to the MANUFACTURERS RECORD:

The MANUFACTURERS RECORD is certainly
entitled to much credit for its advocacy of
improved highways, and with the vast influ-
ence it wields such articles will surely take
deep root. Nothing but constant agitation
of this question will bring our highways up
to the standard of the prominent highways
in European countries, and we trust that
you will continue to hammer away.

We have been hammering away for
good roads in the South, and propose
to keep at it as long as we believe that
our efforts in that particular may be of
value. We regard improved highways
as essential to the full rounding out of
the South, and as necessary to the de-
velopment of its agricultural resources
as they should be developed. We share
with our correspondent at Birmingham
the feeling of satisfaction at the pro-
gress already made in many parts of the

South in improving the facilities for
neighborhood travel, but we shall not
be content until the whole South is
equipped with a network of first-class
highways.

COTTON IN COMMERCE.

The South's cotton fields furnished
directly or indirectly \$504,500,000 of
the \$1,710,100,000 of domestic mer-
chandise exported from this country in the
fiscal year just ended. Of the \$504,500,-
000 total, \$450,400,000 represented raw
cotton, \$20,000,000 cotton cloths, \$19,-
300,000 oil cake and meal and \$14,800,-
000 cottonseed oil. The total increase
in the value of domestic merchandise
exported over the fiscal year ended June
30, 1909, was from \$1,638,400,000 to
\$1,710,100,000, or \$71,700,000. To that
increase raw cotton contributed \$33,000,-
000, or nearly 47 per cent. This increase
in raw cotton, despite a decrease of more
than 3,000,000 bales, is the largest in-
crease in 50 of the principal articles ex-
ported. Of those 50 articles, 29 showed
increases, with the exception of cotton,
ranging from \$7,700,000 for boards and
planks and \$7,100,000 for leaf tobacco,
to a few hundred thousand dollars in
other items.

The direct and indirect contributions
of the South to the export trade of
the country have, during the past few
years, averaged between 38 and 40 per
cent. of the total. In the past year the
products of the cotton field represented
nearly 30 per cent. of the total exports,
and, when considered the contribu-
tions of the South to the \$88,700,000
of petroleum exports, \$38,000,000 to
tobacco, \$36,800,000 boards and planks,
\$25,900,000 bituminous coal, \$12,200,000
cattle, \$9,900,000 sawed timber, \$9,800,-
000 resin, \$8,800,000 spirits of turpen-
tine, \$8,700,000 fertilizers, \$4,600,000
staves and \$444,700,000 articles not in-
cluded in the 50 principal ones, it is
likely that the total contributions of the
South to the export trade were much
above the average, and that the outward
movement of merchandise through
Southern ports played a considerable
part in the restoration of the figures of
merchandise exports toward the place
they held in 1908.

FOR TEXAS.

In anticipation of the meeting of the
special session of the Legislature of the
State, the Texas Commercial Secre-
taries' Association has issued, for the
special benefit of the lawmakers, two
attractively-illustrated pamphlets set-
ting forth the opportunities of Texas in
its vast natural resources compared
with other States, and illustrating by
diagrams the advantages to come from
an encouragement of the development
of these resources. The pamphlets also
tell of the very practical work which
the association, with a membership of
more than 50,000, is doing. The key-
note of the association is "Fewer Laws,
Better Laws," harking back to the Jef-
fersonian principle that that country is

governed best which is governed least. The opportunities of Texas are suggested in the fact that of the 167,865,000 acres of land in the State, 141,365,000 are still uncultivated, one county, in which Houston lies, having an uncultivated area approximating the total area of Delaware, and another, in which San Antonio lies, having an uncultivated area exceeding the total area of Rhode Island. What is to come to Texas is suggested by the fact that the assessed value of property in the State is increasing at the rate of \$50,000,000 a year. As means to development, the State has 121,500 miles of public highways, 13,000 miles of railroad, 2000 miles of navigable rivers, with 400 miles of coast line, and 1500 miles of pipe lines, and the association estimates that since the first of January, 1910, plans for the voting of \$25,000,000 of good-road bonds have either been carried out or are under consideration. Right legislation will strengthen all these means.

CANADA AS A TEXT.

At Eastport, and gazing toward Can-
ada, just across the way, President Taft
said:

Canada is a great country, and we are
just learning how great a country it is.
Speaking for the Administration, we are
convinced that a closer commercial relation
with Canada will be well for both countries,
and if in the next year we can come to any
agreements by which our commercial rela-
tions shall be closer, we shall think our-
selves fortunate. We have reached a time
when neither ought to be envious of the
other, but each ought to be convinced that
the more prosperous the one the more likely
the other is to be prosperous, and that the
growth of the trade of one means the
growth of the trade of the other.

These pleasant remarks have set
divers tongues to discussing again the
relations between Canada and the
United States. On this side of the line
the talk has rather naturally assumed
that there is a strong sentiment in Can-
ada favorable to closer relations with
the United States, and the question of
reciprocity in trade has again loomed.
Such talk disregards the facts of the
wonderful development of Canada in
recent years, and the greatly increased
confidence of its people in their own re-
sources and future. These facts are a
basis for a belief that the hope of pol-
itical union of the two countries is
fainter now than it has ever been since
the days of the Revolution. The pros-
pect of closer trade relations is also fading
with the growth in Canada of a feeling
that if manufacturers of the United
States desire Canadian trade they
should adopt the policy of a few of their
fellows and establish manufacturing
plants in the Dominion. That policy,
indeed, may ultimately have to be
adopted by the interests who really are
the most active in attempts to develop
both in the United States and in Can-
ada the reciprocity idea. Much of that
agitation, as well as the agitation in the
United States for the admission to
this country, free of duty, of "raw mate-
rials" for manufacturing, comes from

elements which have benefited vastly
by the protective tariff, and which seek
to persuade the people that, when ques-
tions of tariff are considered, anything
requiring human labor to become avail-
able may be classed as "raw material."
If the whole truth could be known, it
would be quickly realized that these
elements have possessed themselves of
timber, ore, coal or other mineral re-
sources in foreign lands, and are seek-
ing to make large gains from the "un-
earned increment" induced by legisla-
tion placing the products of such re-
sources upon the free list in the tariff,
or imposing a duty upon them so slight
as to compete disastrously with the
products of like resources in this coun-
try. The only reciprocity that the peo-
ple of the United States should favor is
the reciprocity that will not sacrifice
interests of a large number of American
producers for the benefit of the foreign
trade of two or three producers, and
the only policy of free "raw materials,"
where such materials can be produced
in this country, should be the policy that
would at the same time place upon the
free list the finished products from such
materials.

GAUGED BY BUILDING.

Gauged by official reports of certain
building operations in 1909, the country
is well on the way to recovery from
the financial stringency of 1907-1908.
In 1906 forty-nine selected cities showed
an increase in building operations over
1905 of from \$644,620,873 to \$678,710,-
969. In 1907 the building operations in
these forty-nine cities, with two additional
cities, fell to \$646,059,855, and in
the next year the full effects of the
stringency appeared in a further decline
to \$566,165,404. Last year, however, the
building operations in these fifty-one
cities aggregated \$771,937,564, or 10 per
cent. more than those of 1906, the pre-
vious high-record year.

For 1909 an effort was made to ob-
tain from one hundred and fifty-one
cities detailed statistics of the building
operations by character of buildings,
and also by additions, alterations and
repairs to each class of buildings. It
was found impossible to gain such infor-
mation for more than one hundred and
twenty-eight cities, although from nine
other cities were obtained the totals
for permits and for cost of all building
operations. The aggregate was 273,883
permits, representing \$930,520,713. In
the one hundred and twenty-eight cities
the permits aggregated 264,536, repre-
senting \$903,385,054.

An interesting feature of this report
dealing with nearly \$1,000,000,000 of the
building operations of the country is the
separation of the figures of wooden
buildings from those of fire-resisting
buildings. For new wooden buildings
in one hundred and twenty-eight cities,
96,193 permits were issued, represent-
ing \$218,293,619, or 24.16 per cent. of
the total, and for additions, alterations
and repairs in wooden buildings 69,275
permits were issued, representing \$30,-

161,613, or 3.34 per cent. of the total. The expenditures for fire-resisting buildings by several classes were as follows:

Materials.	New Buildings.	Additions, etc.
Brick.....	\$50,280,630	\$51,233,799
Stone.....	28,006,453	2,203,929
Concrete.....	30,624,068	1,125,594
All other.....	34,628,314	2,827,935
Totals.....	\$597,539,465	\$57,391,257

These figures are not absolute. The division of wooden and fire-resisting buildings, for instance, does not include La Crosse, Wis.; Little Rock, Ark.; New Orleans, La.; Portland, Maine; St. Joseph, Mo.; South Bend, Ind.; Spokane, Wash.; Waterbury, Conn., and Woonsocket, R. I., in which cities building operations for the year aggregated \$27,134,759. For those cities only the totals were available. Additional uncertainty lies in the fact that for Baltimore, Brooklyn, Detroit, Minneapolis, St. Louis and Syracuse all fire-resisting building operations are classified under brick buildings. The probability that for those cities stone, concrete and other fire-resisting buildings are included in brick buildings should be borne in mind in considering the figures which place New York first in new brick buildings, \$151,832,438; Brooklyn, second, \$51,747,760; Chicago, third, \$51,145,400; Philadelphia, fourth, \$30,653,580; St. Louis, fifth, \$20,694,149; Washington, sixth, \$10,303,372; San Francisco, seventh, \$9,066,307; Denver, eighth, \$9,018,593; Baltimore, ninth, \$8,712,392, and Boston, tenth, \$7,285,550.

In new stone buildings Chicago led with \$15,985,300, New York being second, \$3,462,000; San Francisco, third, \$3,130,802; Memphis, fourth, \$988,308; New Haven, fifth, \$807,000; Worcester, sixth, \$500,800; Columbus (Ohio), seventh, \$350,000; Pittsburgh, eighth, \$292,000; Toledo, ninth, \$250,000, and Reading, tenth, \$205,000.

Chicago led with concrete buildings, \$894,800, Seattle being second, \$2,872,400; Philadelphia, third, \$2,014,300; St. Paul, fourth, \$1,319,901; Detroit, fifth, \$1,300,000; Portland (Ore.), sixth, \$1,231,520; Milwaukee, seventh, \$1,224,841; Los Angeles, eighth, \$861,050; Columbus (Ohio), ninth, \$700,000, and Topeka, tenth, \$505,745.

In miscellaneous fire-resisting buildings, which include steel skeleton structures, New York led with \$12,863,100, Newark (N. J.) being second, \$3,323,000; Houston (Texas), third, \$2,154,000; Tacoma, fourth, \$2,012,000; Portland (Ore.), fifth, \$1,600,000; Hoboken, sixth, \$1,600,000; Denver, seventh, \$1,560,000; Buffalo, eighth, \$1,323,950; Duluth, ninth, \$1,200,000, and Rochester, tenth, \$988,546.

These figures, showing that of the cost of new buildings 73.24 per cent. was for fire-resisting structures and 26.76 per cent. for wooden structures in 1909, will appeal strongly both to thousands of persons who recognize the increasing use of brick, stone, concrete, steel and other materials in building as an aid to the proper conservation, the economic utilization, of the timber supply of the country, and also to those who welcome all means tending to reduce the enormous fire waste annually.

R. K. Phillips, editor of the Weatherford *Democrat*, Weatherford, Tex., writes to the MANUFACTURERS RECORD:

The MANUFACTURERS RECORD is a great paper and is doing a wonderful work for the South. It must be a source of gratification to those in charge of it to see their labors so abundantly rewarded, as is evidenced by the enormous industrial and agricultural development of the entire South. I think that the 1910 census will prove a revelation to the world in regard to the development of the South within the past 10 years.

CONGRESSIONAL REPRESENTATION.

Upon a very cob-webby foundation, the census returns for only one State—Rhode Island—having been completed, a number of newspapers, under the inspiration of an over-heated imagination at Washington having little occupation of value, are indulging in a great deal of unproductive discussion of “alarms” and “sensations” about the representation of the several States in Congress based upon apportionment under the 1910 census. The inutility of the discussion appears in the fact that it turns largely upon cogitations as to the increase or the decrease in the number of “Democratic” or “Republican” members of Congress. For there is no essential difference, except in name, between the two classes of Congressmen.

If the newspapers of the country really desire the country to be benefited by the apportionment under the new census they should devote their energies to developing a public opinion that will demand that the ratio of apportionment be so increased that the number of Congressmen shall be reduced for the country as a whole. Seventy years ago that was done without disadvantage to the country. If a return to that policy could be had, and the first Congress under the new apportionment be composed of 200 men instead of 400, the country would be advantaged.

In the first place, there will be an immediate direct saving of not less than \$2,000,000 a year in the salaries and other financial appurtenances of Congressmen, an amount almost double the sum now being spent annually by the people in nearly a dozen efforts to discover why hundreds of millions of dollars are annually wasted by Congress.

In the second place, with Congress reduced to 200 members, there would be just half as much time wasted as at present in the consideration of unnecessary legislation and in speech-making having absolutely no bearing upon questions before Congress, but intended solely for consumption in the districts of respective Congressmen, and twice as much time would be had for the proper consideration on the floor of Congress and before the whole country of vital questions now hurried through under committee rule and costing the country millions and millions of dollars annual loss.

With a reduction in the quantity of Congressmen the quality of Congressmen would probably be enhanced, to the benefit of everybody concerned.

BREADSTUFFS AT SOUTHERN PORTS.

Because of rather abnormal conditions as to some forms of breadstuffs, especially wheat, in the past fiscal year, the figures of the value of such exports at Southern ports have little significance in themselves. But, compared with the figures of preceding years, some rather interesting suggestions may develop. In the early years of the decade now closing there was a marked tendency toward an increase of the movement of breadstuffs for export through Gulf ports. For instance, the fiscal year ended June 30, 1903, showed an increase over 1902 in the value of all such exports of \$8,020,627. At eight leading districts the decreases aggregated \$14,540,458, and at all other districts the increases aggregated \$22,526,085. Of these increases Galveston showed \$7,764,594 and New Orleans \$7,122,256.

At six Southern customs districts the increase in the value of such exports was from \$30,850,182, in 1903, to \$68,701,522, in 1906, or at the rate of a little more than 122 per cent., while at seventeen other customs districts the increase was from \$70,257,235 to \$108,648,954, or at the rate of less than 55 per cent. The increase at the six Southern districts was nearly 50 per cent. of the increase for the whole country.

The increases at the six Southern districts between 1905 and 1908, in comparison with that for the whole country, are shown in the following table:

Districts.	1905.	1908.
Baltimore.....	\$9,629,508	\$27,133,298
Newport News.....	4,298,675	3,618,902
Norfolk-Portsmouth.....	783,287	2,347,563
Galveston.....	2,928,986	13,991,267
Mobile.....	2,520,810	2,540,365
New Orleans.....	10,889,916	11,065,087
Total.....	\$30,850,182	\$60,697,089
All districts.....	161,107,417	205,350,759

The fiscal year 1908 was a record year in some respects, but the two following years have shown declines. These are especially marked in the past fiscal year, as indicated in the following table:

Districts	1909.	1910.
Baltimore.....	\$17,206,240	\$13,476,333
Newport News.....	2,820,702	1,252,753
Norfolk-Portsmouth.....	1,257,297	58,117
Galveston.....	14,057,561	6,244,907
Mobile.....	2,238,942	2,794,780
New Orleans.....	9,389,273	9,622,393
Total.....	\$46,970,015	\$34,049,283
All districts.....	150,552,216	121,651,543

For the country these exports declined from \$150,552,216, in 1909, to \$121,651,543. The only Southern districts showing increases were Mobile, from \$2,238,942 to \$2,794,780, and New Orleans, from \$9,389,273 to \$9,622,393. The total decrease at six Southern districts was from \$46,970,015 to \$34,049,283. There were increases at only eight of all the districts of the country, two of them being Southern. As indicating still the general tendency, it may be noted that three Gulf ports—Mobile, New Orleans and Galveston—show an aggregate increase between 1905 and 1910 from \$16,139,712 to \$18,662,080.

HANDLING RAW MATERIALS AT HOME.

Encouraged by additions to Asheville's facilities for industry, Judge J. C. Pritchard, chairman of the committee on manufactures, has made a brief report to the Board of Directors of the Board of Trade, urging speedy utilization of opportunities. He says:

We are in the center of a region containing the greatest amount of mineral to be found in our State, and this is the initial shipping point for the lumber that is sent from here to Northern and Southern markets to be manufactured. It is folly to permit our raw material to be shipped away from here for the purpose of being manufactured when we have sufficient water-power for all purposes, the best climate in the United States and as intelligent labor as can be found anywhere.

The railroads have given us a splendid rate on furniture, and there is no reason why this should not be made the largest furniture-manufacturing center in the country, and instead of shipping our kaolin to East Liverpool, Ohio, we should secure the establishment of a pottery plant here. This is true as to our other mineral products.

Instead of shipping our timber north to be manufactured into spokes, axe handles, etc., we should manufacture the same here, and thus permit our people to realize the profits derived from this industry.

Judge Pritchard cites the notable case of High Point, with its thriving furniture factories and other woodworking establishments, as an inspiration for Asheville, and he quotes President Fliley of the Southern Railway Co. as regarding Asheville as an ideal place for manufactures, and as desiring to co-operate in securing industrial establishments for the city. Hence it is up to everyone interested in the develop-

ment of Asheville to lose no time in putting into effect Judge Pritchard's suggestions. And there are other Southern towns with chances similar to those of Asheville, towns which will become populous industrial centers as soon as they adopt the policy of manufacturing for sale in other parts of the country the raw materials which now pass their doors untouched.

That thought was emphasized by Secretary George R. Brown of the Little Rock Board of Trade, in a recent talk before the Summer School of Commerce, which is conducted in his city under the auspices of the School Board. He pointed to a number of opportunities that are bound to come to the graduates of the school; he dwelt upon the splendid position commercially of Arkansas in connection with the completion of the Panama Canal, and said:

Another matter to which your minds should be directed is the fact that so little of our raw products are manufactured here. We raise a million bales of cotton a year and buy our cotton cloth in New York. We grow the finest timber in the world and our wagons are made in the North. We manufacture cottonseed-oil and it is refined in other cities. We have glass sand and no glass factory. We should unite in encouraging the building of factories, encourage them, buy from home industries and patronize home institutions.

In pressing in the advisability of such a policy upon the minds of the young people who are to take their place in the commercial and industrial life of the city, Secretary Brown is merely carrying out the work of his organization, which has for some time been to add to the front in seizing every opportunity to add to the importance of Little Rock. When the rising generation becomes impressed with the opportunities of its home surroundings, and with the sense of the advantages to be derived from developing them, the South will not have to concern itself with extraordinary plans to induce immigration.

MARKETING OF PUBLIC LOANS.

Considerable attention was attracted and remark excited by the recent sales of city securities by two large municipalities, namely, Baltimore and Philadelphia, direct to investors, or without the intermediary of bankers or brokers, who have in the course of most floatations of public loans purchased the bonds from the creators thereof at wholesale and disposed of them at retail to the public. Financial conditions recently favored the marketing of these two particular loans in the manner chosen, and it may be expected that in places where a sufficiently large demand exists for city securities the example of Baltimore and Philadelphia will be imitated with greater or less success, as merited by circumstances.

But it must not be imagined that the elimination of the middle man's profit in the two instances here cited can be accepted as a guarantee that any city, county or State which desires to float its bonds without the aid of bankers or brokers can profitably do so. There are times when it is distinctly to the advantage of the people that those whom they have entrusted with the management of their public finances should avail themselves of the opportunity to secure funds promptly and in large volume to meet the needs of government. This they can do by disposing of such loans to reliable financial houses who, of course, cannot do business without a profit, but who earn that increment justly for the accommodation of putting a public treasury in funds at a time when repletion is necessary.

It appears that the experience of Baltimore came about because the bids from bankers and brokers were too low in the judgment of the city's finance commissioners, who thereupon determined to sell the city "stock," as it is locally termed, or bonds, to use the language of most financial markets, "over the counter," or from the City Register's office direct to the public. One reason for the lower bids was doubtless the feeling in the market that most investors, as a result of increased costs of living, demanded investments which should return a larger interest rate than they had hitherto been satisfied to accept, although the exemption of city stock from taxation rendered it more attractive than low interest rate railroad or industrial bonds. Be that as it may, the bids from familiar sources were refused, and the city officers announced their decision to sell to the public at par the securities on hand. The result was gratifying, all being disposed of within a reasonable period.

In the instance of Philadelphia, it appears that the city authorities vainly endeavored to sell the bonds in their entirety through the recognized channels of bankers and brokers. Then, as a last resort, the securities were offered direct to investors from the city treasury, and the loan was oversubscribed! Whether the bond houses misjudged the temper of the public with respect to city loans, or they were already supplied to the limits of their means with other securities for sale, may not be disclosed, but the fact that this and at least one other large city soon became en rapport with the small investor, who is so highly esteemed, is deserving of keen remembrance, both by public authorities and by dealers in bonds.

Nevertheless, for the present at least, these floatations of public loans without the services of middle men may be regarded as only exceptions to the rule affecting such transactions.

ELECTRICAL DEVELOPMENT.

Suggestive of the activity in the development of electric power in the South are nine undertakings, involving more or less recent contracts and representing an aggregate expenditure of nearly \$2,000,000. They are:

The Doe River Light & Power Co., Elizabethton, Tenn., is building a water-power plant, 5000 horse-power capacity, and will transmit this power at 44,000 volts to Bristol, Tenn., and other neighboring towns. Work on the dam is just commenced, and the plant will probably be in operation by the late fall. The cost of the developments will be about \$250,000.

Great Falls & Old Dominion Railway Co., Washington, D. C., is increasing the capacity of its plant at a cost of approximately \$50,000.

The Capital Traction Co., Washington, D. C., is increasing the capacity of its main power plant by 6000 kilowatts, and will rebuild the entire station at a cost of approximately \$250,000.

Richmond & Henrico Railroad Co. has started work on a street-railway system to connect Richmond with a suburban district, costing approximately \$500,000.

Virginia Railway & Power Co., Richmond, Va., has just commenced a 5000-kilowatt addition to the capacity of its power plant that will extend its system at an approximate cost of \$200,000.

United Railways & Electric Co., Baltimore, Md., is increasing the capacity of its power plant by the addition of a 9000-kilowatt turbo unit, installation of which is about complete. The approximate cost of this addition is \$150,000.

Pennsylvania Water & Power Co. has about completed the installation of a large transformer station near Baltimore to furnish the city with power, cost of substation alone being about \$150,000.

Baltimore Copper and Smelting Works is making large increase to its plant, total amount of expenditure being about \$250,000.

Bedford City, Va., will build a water-power-electric plant, for which contracts have just been closed; cost to be approximately \$100,000.

These undertakings in three or four States are only a small percentage of the work of electrical development under way in the South, and they are mentioned merely as typical of the range and varied character of the work.

THE COTTON MOVEMENT.

In his report for July 22 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 325 days of the present season was 10,235,169 bales, a decrease under the same period last year of 3,237,683 bales. The exports, less 60,126 bales returned from abroad, were 5,808,311 bales, a decrease of 2,382,538 bales. The takings were, by Northern spinners, 2,044,526 bales, a decrease of 637,764 bales; by Southern spinners, 2,229,588 bales, a decrease of 147,586 bales.

SIX MONTHS OF PIG-IRON.

A Record-Making Half-Year Just Ended.

The production of pig-iron in the first half of 1910 was 15,012,392 gross tons, against 14,773,125 tons in the last half of 1909 and 11,022,346 tons in the first half of 1909. The production of pig-iron in the first half of 1910 was greater than in any half-year in our history. The following table from the *Bulletin* of the American Iron and Steel Association gives the details of 1909 and 1910 by States:

States.	Production—Gross tons.— (Includes spiegeleisen, ferro-manganese, ferro-silicon, ferro-phosphorus, etc.)		
	First half of 1909.	Second half of 1909.	First half of 1910.
Massachusetts...	9,685	8,703	7,505
Connecticut.....	688,828	1,044,847	1,017,951
New York.....	118,219	176,255	155,087
Pennsylvania.....	4,755,079	6,163,745	6,099,342
Maryland.....	115,260	171,594	170,708
Virginia.....	183,019	208,115	244,276
Georgia.....	10,101	15,971	6,725
Texas.....	800,708	962,900	1,012,545
Alabama.....	63,200	165,082	137,439
West Virginia.....	49,580	36,791	46,520
Kentucky.....	152,628	181,217	215,969
Tennessee.....	2,242,987	3,308,558	3,210,562
Illinois.....	1,057,874	1,409,282	1,552,160
Indiana.....	429,191	544,098	716,832
Michigan.....	171,277	176,900	170,814
Minnesota.....			
Missouri.....			
Colorado.....			
Oregon.....			
Washington.....			
California.....			
Total.....	11,022,346	14,773,125	15,012,392

The increase in production in the South in the first six months of 1910 over the same period in 1909 was from 1,274,496 tons to 1,854,181 tons, or by 34.9 per cent., and in the rest of the country from 9,647,850 to 13,158,211, or by 36.4 per cent.

Steel Corporation Earnings.

At the quarterly meeting of the board of directors of the United States Steel Corporation it was shown that the net earnings of the Corporation in the three months ended June 30 last were \$40,170,960, an increase of \$10,729,469 over the same period last year and of \$2,554,084 over the first three months of 1910. The balance, after payment of regular dividends on preferred and common stock outstanding, is \$8,000,000 in excess of the surplus in 1909, and enabled a special \$7,500,000 appropriation for expenditures.

Railroad Improvements Under Way in Arkansas.

[Special Correspondence
Little Rock, Ark., July 21.

Three of the trunk lines in Arkansas are spending more than \$3,000,000 in new work this year, not counting the \$800,000 union station in this city, which now lacks but \$25,000 of completion.

The largest item of this expense is that of the Iron Mountain for 52 miles of second track on its main line to the north of Little Rock, which will cost completed \$1,300,000. This work is not being done in a single stretch of track from Little Rock to the north, but is being done at points where the second track is most needed at this time, and as the company gets to it the gaps will be filled in, making a continuous double track from St. Louis to Texarkana, a distance of 494 miles. Out of Little Rock the track extends to Bald Knob, where the Memphis division taps the main line, or the Arkansas division.

At White River, which is a mile this side of Newport, the double track begins again and extends to Diaz, north of Newport, where the White River division taps the main line of the system. This is said to be the largest contract now under way in the entire Southwest, and there is no doubt that it is the largest contract of any kind now in progress in Arkansas. At this time not less than four contractors are now at work on the grading preparatory to the laying of the rails early in the fall.

The next largest contract under way is that of the Rock Island for 90 miles of new steel from Little Rock to Booneville, the latter of which is the western terminus of the Arkansas division of that road. This contract has been in progress several months, and will be completed early in September. As soon as that is done the work of laying steel from Little Rock to a point near De Valls Bluff, between Little Rock and Memphis, will be undertaken. This stretch of track is about 40 miles long, making in the neighborhood of 130 miles of new 85-pound rail the Rock Island will lay this year in Arkansas, at a cost of slightly over \$400,000.

The company is also expending \$300,000 in betterment work along its lines in this State. The Hot Springs branch from Little Rock has just been ballasted with stone and clear gravel, while a large number of wooden bridges have been taken out and concrete substituted. Where the wooden bridges are allowed to remain they are being decked with concrete, which will afford protection from the greater part of the fires which do so much damage to wooden bridges in this State. All this work will be completed before the first of the coming year.

The Rock Island is now engaged in spending more than \$200,000 on the Biddle yards, in the southeastern part of Little Rock. Earth is being hauled from Britton, five miles from Little Rock, on the Hot Springs branch, for the filling, and the American Concrete Co. of Chicago is at this time building 849 reinforced concrete piles, upon which will rest the coal chute, roundhouse, turntable and other buildings at Biddle. It is stated that not less than \$1,000,000 will be spent by this company at Biddle, but Vice-President Whitenton of the company is authority for the statement that only \$200,000 is available for the work this year, and that it will push the company to use up that amount by the first of January. The filling has been delayed by the unseasonable rains, so that the contractors for the buildings are not able to get started at their work as early as was expected.

The new Biddle yards will not affect

the terminals of the company in Argenta, and the property across the Arkansas River (Argenta) will be used as it is now.

The shops of the company are now in Argenta, as are practically all the switching yards of the system at this point. The necessity for the bigger yards and additional shop facilities arises from the building of the Louisiana division of the Rock Island from this city to Eunice, La., which opened up a territory which had never been reached by a railroad.

It is also estimated by officials that in addition to this the company is spending \$100,000 in various other ways, making a total of not less than \$1,000,000 now being spent in Arkansas.

The Iron Mountain is at this time engaged in cutting down the Bergman hill, just south of the Missouri line, on the White River division, in order to reduce the grade at that point. Now the cut is 50 feet deep, and when it is completed this fall it will be 65 feet deep and across the top it will be 265 feet wide. The road formerly ran over this hill, and the loss in tonnage was so great that the company decided to expend the sum of \$100,000 for the purpose of taking it down. It is believed that the appropriation will do the work.

At the present time more than 1,000,000 yards of earth have already been taken from this cut, according to Civil Engineer A. W. Jones of the company, who is in charge of the new construction work in Arkansas. Mr. Jones works directly under Chief Engineer E. F. Mitchell of the company, at the head of the construction department of the Iron Mountain.

The Omaha tunnel, which is one of the longest in this section of the country, is being lined with vitrified brick, also, at a cost of \$50,000, by the Iron Mountain. When this tunnel was bored in 1903 it was left rough, and from time to time accidents have been but narrowly averted on this account. For that reason the company has decided to pave it throughout, bottom, overhead and sides, with the best brick obtainable. This work will be completed before the end of the year.

In addition to this, the Iron Mountain is now erecting stations in Arkansas costing more than \$150,000. This, of course, does not include any part of the union station in Little Rock. Among the stations which are now under way is that at Arkadelphia. This will cost not less than \$25,000, while that at Prescott will reach the same amount. The station at Beebe is now open, having been completed 10 days ago at a cost of \$15,000, and at Hope the company will erect this year a depot which will cost \$25,000.

The company and the people of Conway have not yet agreed on the exact style of the station to be erected at that point, but it is understood that the building will be similar to that at Arkadelphia, and will cost practically the same. The station at Ozark will be rebuilt, the people of that place joining with the company and aiding in the erection of the building in order to get a stone building where the company desired to erect a brick structure.

A station will also be erected at Higginson this year by the Iron Mountain and the Rock Island. These two roads cross at that point, and the station is joint.

The Cotton Belt has completed and on August 1 will occupy a handsome passenger and freight station in Argenta, across the river from Little Rock. The passenger station is one of the handsomest small stations in this section of the country. The cost of the two Argenta stations is stated

to be in the neighborhood of \$100,000, not including the new tracks and the like which have become necessary in the Cotton Belt withdrawing from the Iron Mountain station in Little Rock. In East Argenta the Cotton Belt is spending something like \$200,000 in new freight yards, a roundhouse, car shop and other shops necessary for the conduct of the business at this point. The Cotton Belt will put on a fast freight service from St. Louis to Little Rock direct, and a fast passenger service from Little Rock to Shreveport, La., direct, and all the business will be handled through the Argenta stations.

The Cotton Belt, preparatory to putting on this fast freight and passenger service to Little Rock, is balsting its line of track, 44 miles in length, from Little Rock to Altheimer, on the main line, with crushed stone. This work is costing in the neighborhood of \$250,000, and it is stated by officials that it is the intention of the management to complete this during the present year.

The Rock Island is also spending a large amount of money in rebuilding the Booneville yards, erecting a new coal chute and similar improvements. Booneville is where the Arkansas division and the Indian Territory division of the Rock Island meet, and the increased traffic over the main line has made necessary the additional facilities there.

The station at Carlisle is being rebuilt, double in capacity, by the Rock Island, and at several other points in the State small stations are being erected.

In Little Rock \$100,000 has been spent by the Rock Island within the past 10 days for real estate in the heart of the business district of this city, upon which a freight station and freight and passenger yards will be located. At present the Rock Island freight station is at 2d and McLean streets, much farther from the business part of the city than is the Iron Mountain freight station, and it is the intention of the Rock Island to erect a freighthouse at 3d or 4th and Commerce streets about four times the size of the present station, large enough to care for the local business and at a point which will be more convenient to the business houses of the city. In this connection it is stated that not less than \$200,000 will be spent in this manner. One parcel of property remains to be purchased by the Rock Island in that district, and as the owners are a bit slow about affecting a trade, it is possible that condemnation proceedings will be the final resort to prevent any delay in getting to work on the station and yards.

In Argenta the Iron Mountain is completing eight miles of repair track. A total of \$75,000 has been spent on this work, and there remains \$25,000 to be done, and this will be completed. The Baring Cross shops of the company, valued at \$6,000,000, are the largest of the Gould shops, and the repair tracks are being constructed to enable the shops to turn out more work. Three other shop buildings will be erected during the year 1911, but the value of these are not included in the figures affecting railroad improvement in Arkansas for the year 1910.

The new union station erected by the Iron Mountain in this city lacks but \$25,000 of completion. At this time a total of \$775,000 has been spent upon the building. The paving of the plaza, the completion of the train sheds and a few minor details in the building, with the grading of a part of the passenger yards, will complete the station and its surroundings at a cost of \$800,000.

That the era of prosperity and activity has returned to Arkansas is apparent to any who will examine these official figures.

J. L. CARAWAY.

Early Days in Iron and Steel.*

The year 1857 is a memorable period in the history of the manufacture of iron. As before stated, in 1844 the forge carpenter and millwright were superseded by the machinist, who now came to the front as the mechanical engineer, not full-fledged, but with an amount of knowledge gained by experience, which qualified him for the all-important duty which awaited him.

Up to this time all the rails were rolled on a two-high mill, a most crude and unscientific manner of rolling iron, especially rails, they being passed back over the rolls, the metal cooling, and as the rail was formed the flange became thinner and cooled more rapidly, and consequently it was much more liable to crack and tear up.

In the three-high mill the tendency to crack or tear the flange is greatly reduced from the fact that in passing through the rolls in the opposite direction, any crack or tear that may occur is rolled down instead of being increased, as in the two-high mill, in which it frequently happened that the flange tore off the whole length of the rail, winding around the roll and forming what was called a collar, and at times breaking the roll. Besides the greatly-increased quantity that could be made in a given time, the quality was greatly improved and the criminal practice of patching rails, which was liable to break in the track, killing people, destroying property and delaying traffic, was completely abandoned. This alone in the days of iron rails made the improvement invaluable. But the traveling public at large knew nothing of the danger they were constantly exposed to when on a train.

A short time since a couple of gentlemen were in a parlor car on a train going at a speed of about 50 miles an hour. The younger of the two remarked: "Here we are, as happy as if we were in our own drawing-rooms." The older of the two, Mr. Snow, the veteran car-wheel maker, said: "Young man, if you knew as much about car wheels as I do you would not be so happy." This is fortunately the condition of a great majority of the traveling public: they know but little of the danger of traveling they are exposed to.

After considering all of the virtues and advantages of the three-high mill, there was still a large majority of the stockholders of the Cambria company opposed to it. They notified the stockholders who were favoring it that they would hold them responsible for the loss and damage that might grow out of their unwise action in adopting a new and untried method that was against all practice in this and the old country.

Next came my friends in the trade and out of it, begging me to abandon what would surely prove a failure and blast my reputation for life. One of my dearest friends, with whom I had been employed for a number of years in the iron business, came to see me and if possible to get me to change my plans.

To them all I said: "No, I can make it work, and it is the only plan that can be adopted that will save the company; otherwise, there will be a funeral, and I do not wish to attend it." After all these many years there is no other person than myself who can fully appreciate the trying position the managers were in.

On the one hand, I was to build a mill on an untried plan, and absolutely refused to build such a mill as they wanted, knowing that only in a small degree would it remedy the trouble and that the money spent on such a plant would be thrown

away. On the other hand, as stated before, there was a strong party of stockholders protesting in the most positive manner against going on with my plans and notifying the managers that they would hold them personally liable for all loss and damage that might grow out of their unwise action. Notwithstanding all the opposition and the prediction of failure, to all of which I gave but little attention, I finished the work on the new mill as fast as possible. But there were many difficulties in the way. The most serious was the want of proper tools and facilities for doing the work. Many makeshifts had to be improvised requiring time and labor.

At length, on the third day of July, 1857, about 53 years ago, the new and untried mill was completed and ready to be put in place and the old mill was shut down for the last time. On July 5 we commenced tearing the old mill out, as the new one had to be put in the same place. The work was pushed as fast as possible, day and night, but as it was before the days of electric lights, the night work could not be done with the same expedition as today.

On the twenty-ninth of the same month everything in the rail department was remodeled and the floor line of the mill was raised two feet. On the twenty-ninth everything was completed and the mill ready to start. The starting up of this mill was the most trying period of my life, for the future of the company as well as my own was in the balance. In giving an account of the starting of the mill I will quote from a paper written for a former occasion: "There were no invitations sent out. The heaters to a man were bitterly opposed to the new kind of mill, so we did not want them about at the start. We, however, secured one of the most reasonable of them to heat the piles for a trial. We had kept the furnace hot for several days as a blind. Everything being ready, we charged the furnace. About 10 A. M. the first pile was drawn out of the furnace and went through the rolls without a hitch, making a perfect rail. As the rolls were driven from the end of the engine shaft, dispensing with all gear wheels, the process was practically noiseless, thus at once proving both departures to be correct."

You may imagine what my feelings were as I looked upon that first and perfect rail ever made on a three-high train, and you may know in part how grateful I felt to the few faithful men who were about me and who had stood by me during all these trials and difficulties. These were Alexander Hamilton, superintendent of the mill; Thomas Lapsley, who had charge of the rail department; William Canam and my brother, George, all of whom have departed this life. The mill was started on the following day on double turn. Everything worked well up to noon on Saturday, it being the custom to stop rolling at that time. About 6 in the evening Mr. Hamilton and myself left the mill, and on our way home we congratulated ourselves on the fact that our long line of troubles was now over. About an hour later I heard the fire-alarm whistle blown, and rushing back to the mill found it one mass of flames. In less than one hour's time it was burned to the ground, and a story was started that the new mill was a failure, and that we had burned it down to hide the blunder. The situation that Saturday night was such as might appall the bravest heart. The production of our most strenuous labor lay there a mass of black, smoky ruins, and the money that was so hard to get to build the new mill was gone. The prospect was gloomy, but in the midst of the great darkness there lay a pile of rails made in the new mill, the most perfect rails in finish that had ever been made, neither patch, crack or flaw in one

of them, thus proving the new mill a grand success in every way. This fact renewed our courage to rebuild the mill, and in four weeks' time the mill was rebuilt and running, and made 30,000 tons of rails without a break or hitch of any kind, thus making the Cambria Iron Co. a great financial success and giving it a rail plant far in advance of any other plant in the world. This position it held unquestioned for both quality and quantity until the revolutionary invention of Sir Henry Bessemer, which was introduced into this country. Its introduction and perfection will ever remain one of the most interesting epochs in the history of the iron business.

When I was a boy of 10 years I read a speech made by Thomas F. Benton of Missouri, in which he said that if he had his way he would build a great national highway from the Atlantic to the Pacific ocean, and on the highest peak of the Rocky Mountains he would erect a colossal statue of Christopher Columbus, with the right hand extended as if saying: "There is the way to India." I have never forgotten the reading of that great speech, and, as I grew up and railroads came into general use, I believed it would be practicable to build one across the mountains, but I did not expect to make the rails for it, which I did, and it was the introduction of steel rails that made it possible. Now I have lived to see five or six transcontinental lines built, and we are trying to get more. Were they to undertake to build a railroad from the Atlantic to the Pacific and start at the Atlantic end, using iron rails such as used to be made, and using 150-ton locomotives and cars carrying 50 tons of freight, the rails on the Atlantic end of the line would be worn out before the Pacific would be reached.

Steel is the base of our immense inland system of transportation. It is the imperial metal that has enabled the engineer to perform the daring and remarkable engineering feats which he has accomplished during the last half-century, without which they would have been practically impossible. It is the material used in the construction of the monster floating palaces that cross the vast ocean. Fifty years ago steel was a luxury to the engineer.

The modern practice of steel-making in the hands of the mechanical engineer, the metallurgist and the chemist has wrought wonders in producing a material which is used alike in the manufacture of articles of the most weighty, the rudest and cheapest of grades, and in construction of the most intricate, finest and most delicate implements and machinery. And it is boldly asserting its value and importance throughout every walk of life.

It is to the invention, introduction and perfection of the modern system of steel-making in this country that we are indebted for the education of our people in the scientific, mechanical and metallurgical arts, which has enabled them to erect such manufacturing plants as were necessary to supply our Government with the sinews of war, which made it possible to achieve those glorious victories which at once placed us in the front rank among the nations of the earth.

The report by Consulting Engineers John R. Freeman and Frederic P. Stearns on the enlargement and improvement of Baltimore city's water supply has been published by the city government.

The Larchmont Transit Co., Norfolk, Va., it is reported, contemplates running automobiles between the center of Norfolk and Larchmont, beginning service in September, the fare to be five cents between the two points, with service every 20 minutes.

Southern Activity in Public and Private Improvements

[Written for the Manufacturers Record.]

From the 14 Southern States and from Oklahoma and Missouri the MANUFACTURERS RECORD has received this week letters from architects, contractors, builders and others at various points giving details of improvements aggregating many millions of dollars in cost under the auspices of State, county, municipal or Federal governments, for corporations and for individuals, recently completed, now under way or definitely planned. These letters, which fill the five following pages, reveal a notable activity in building operations of many kinds, in road and street construction and in home-building, in railroad and levee work, in bank and office building, and in sewers, water-works and other public utilities.

Last year showed a decided revival of such operations in the South, and though at some points there is now a bit of slackening up because of tightness in the money market, the general situation in the South has become normal, and for that section normal means activity all along the line in city and country.

One firm of architects, for example, has since the first of the year completed plans for six churches aggregating in cost \$150,000, three residences ranging in cost from \$12,000 to \$9500, two jails costing \$33,000 and stores and offices costing \$35,000, and has under way plans for three churches aggregating \$77,000 in cost. At another point a construction company is bringing to completion a \$250,000 bank building and a contractor will finish within the next three months a bank building costing \$1,500,000 and has just started upon a factory building to cost \$200,000. In a suburb of a Texas city contracts are nearing completion, representing an aggregate expenditure of nearly \$500,000, and in a Florida city, where a railroad system is preparing to build a passenger depot 960 feet front and 100 feet deep, the general situation is described as "ten-thousand-dollar residences are more numerous now than five-thousand-dollar residences were a few years ago." Work in filter beds for a municipal drainage plant costing \$350,000, upon a three-mile extension of a railroad costing \$90,000, upon macadamizing about three miles of public highway costing \$50,000 and upon a mile of embankment across a marsh costing \$22,000 represent the activities of another contracting firm. A \$100,000 building, part steel and part reinforced concrete, for a retail grocery company, and a \$700,000 office building of steel and either reinforced concrete or tile, a \$15,000 club house, three schoolhouses costing \$65,000, a \$50,000 Young Men's Christian Association building, a \$40,000 planing-mill outfit, \$20,000 water-works and electric-light plant, 1,200,000 cubic yards of levee work, a \$25,000 heating contract, \$400,000 worth of lock and dam work in river improvement, a \$40,000 baseball park, an \$80,000 hotel, a \$46,000 postoffice, a \$225,000 hotel, a \$75,000 office building, a \$150,000

drainage contract, \$200,000 of street improvements, a \$125,000 sewerage system, a \$15,000 country club, a \$50,000 store building, a \$100,000 boulevard, a \$400,000 work of tunneling, \$35,000 of miners' houses at one point and many private dwellings, ranging in cost from \$1200 to \$30,000, are among the many other items mentioned in the letters, which follow:

ALABAMA.

Athens.

W. B. Norwood, general contractor, Athens, Ala.:

Limestone county has just about finished the expenditure of \$135,000 on its public roads, which has caused real estate to enhance wonderfully in value. The municipality of this place has just issued bonds to the amount of \$7500 for the extension of water and sewerage facilities. I am just completing three brick-veneered residences, one costing \$7200, one \$6300 and one \$5150, and am starting on one frame residence, contract price of which is \$4750, and have several other smaller buildings under construction. I also have the Greenes University school building nearing completion, price of which is \$14,050. I now have five sets of plans in my office, for which contracts have never been awarded, but presume will be within the next 30 days, which will aggregate between \$28,000 and \$30,000, one of which is in Decatur, Ala., a brick warehouse; the others are here, six brick storehouses on same block and by same party, two nice residences and one Roman Catholic church. There is and will be more building done in this locality this year than has been done altogether since the money panic. In visiting the rural districts I notice that there is hardly a farm settlement that is without some improvement of some character, showing that this immediate locality has resumed a normal condition; in fact, it is in a flourishing condition.

BIRMINGHAM.

Jesse L. Burns, contractor and builder, Birmingham, Ala.:

I am pledged to complete by September 1 the East End colored school. This building is being erected by the city of Birmingham at a cost of \$33,000, and is now more than half finished. I am also supervising the construction of the Fifty-sixth Street Baptist Church, which will cost when completed \$50,000, and is now ready for the roof. As to the outlook in this district, I can only say that there is much work of this kind being done by our local contractors, and prospects seem good for the future.

Barbour Plumbing, Heating & Electric Co., Birmingham, Ala.:

We have several nice jobs that we are working on at the present time. We have a job in Tuscaloosa, Ala., for the Academic building, amounting to \$5500 for the plumbing, electric and roofing. We have a nice job with the city of Birmingham, amounting to \$25,000 in round numbers, for the heating of three schools buildings, the Barker, J. B. Cunningham and Avondale colored school buildings. We have succeeded in getting a nice little contract of \$9000 for the heating and ventilating of the Girls' High School of Atlanta, Ga. This work we secured last week. We have minor jobs amounting to between \$35,000 and \$40,000 here in the city of Birmingham.

Brewer & Jones, general contractors, Birmingham, Ala.:

We are working on construction of lock and dam No. 2, Tombigbee River, Alabama, United States improvement; contract amounts to some \$400,000. The work is approximately one-quarter done. It is much delayed by high water. We are also constructing seawall at Fort McRee, Fla., for the United States Government, which work is about one-half completed. This contract amounts to some \$90,000. The outlook is not promising for railroad work except in very small extensions or betterments, a few of which are being made in this district.

Southeastern Engineering Co., consulting engineer and sales agent, Birmingham, Ala.:

We have on hand a reinforced concrete and steel grandstand and bleachers for Birmingham Baseball Association and the fixing up of their park, which work is about four-fifths completed; cost \$40,000; reinforced concrete bank and office building for Etowah Bank & Trust Co., Gadsden, Ala., which is about one-third completed; cost \$40,000. We are pleased to state that prospects seem better for the latter half of the year than they have been for the first half.

Florence.

J. F. Madry, contractor and builder, Florence, Ala.:

I have the Rogers store building (\$20,000) nearing completion; have begun work on the Leighton high-school building. I have only one other small job of about \$3500 for residence for J. E. Kirk of Tuscaloosa.

Mobile.

The Bigler Bros., contractors, Mobile, Ala.:

We are now about completing a \$50,000 cement sidewalk paving job at Goldsboro, N. C., and we have one other contract on hand at Lake City, Fla., but not commenced, to amount to \$25,000.

TROY.

J. F. Morgan, general manager Troy Lumber & Construction Co., builder and contractor, Troy, Ala.:

The business outlook is exceedingly bright. We are beginning an \$80,000 hotel, for which O'Kell & Cooper of Montgomery, Ala., are the architects. We also have a number of residences going up in our city. The city of Troy has let contract to Mitchell Bros. of Montgomery, Ala., for laying sanitary sewerage; also to extend the water mains on Madison, Park and Thoupan streets.

ARKANSAS.

Hope.

N. P. O'Neal, Hope Brick Works, Hope, Ark.:

I am pleased to say that this immediate section of Arkansas is now on an upward trend in the building line. Our plant has more business, and has had all the season, than any year since 1906, and the outlook is very encouraging to us. The four agricultural schools are making considerable activity in the towns near where the schools are being built, other school buildings are being erected all around us, and quite a bit of railroad work is projected, but not in progress as yet. Crops are late because of the late spring and frosts in April, but are very promising so far. We cannot help but believe our State is entering upon an era of extensive development that will be remarkable.

DISTRICT OF COLUMBIA.

Washington.

W. B. Holtzclaw, Washington, D. C.:

Conditions here in the building line are good. There are many important houses and buildings going up, to say nothing of the cheap rows and blocks and apartment-houses.

FLORIDA.

Jacksonville.

W. T. Hadlow Company, contractors and builders, Jacksonville, Fla.:

We are at present building a hotel at Seabreeze, Fla., for Clarendon Hotel Co., value \$225,000; a postoffice at Greenwood, S. C., value \$46,000; a brick warehouse, value \$9000; remodeling business block, \$20,000; alteration business block, \$1500; alteration county jail, \$3000, and bank, Daytona, Fla., value \$18,000. We expect a good deal of work this fall.

McClure & Holmes, architects, Jacksonville, Fla.:

We now have in course of construction reinforced concrete building for New York Laundry, estimated cost \$30,000; fire station No. 5 for city of Jacksonville, cost \$10,500; have just completed drawings for two-story brick building for David Bros., to cost \$10,000. There is considerable work contemplated here in the way of hotels and business buildings.

Orlando.

Frank Hyres, Orlando, Fla.:

We have a small town of about 6000, and no very extensive buildings put up here. I am just completing one three-story building, 40x60 feet, to be used as a private school building. This building is constructed of cement brick and blocks of my own manufacture. There is considerable cottage building of cement blocks and wood. A Government building is to go up here, but I do not know how soon or what the cost will be.

Palatka.

George Tillman, general contractor, Palatka, Fla.:

I am now completing a \$4500 residence for Mr. L. C. Canova; am just beginning a plate-glass front store building for Mrs. M. J. Murphy at a cost of \$6000; am completing repairs and additions to the Presbyterian church for \$1500; have just begun a \$3500 residence for A. M. Shelley, and have closed a contract for a new front for the store building for Dr. W. H. Rosenberg to cost \$1500, and have under way repairs and additions to the residence of Capt. J. D. Points to cost \$1000.

Pensacola.

Wills & Broughton, Pensacola, Fla.:

We have at present only one brick building under contract. It is a two-story building for store and living rooms to cost \$6000. We have some other contracts of less value. The outlook here is very good for building for store, warehouse and residence buildings. The city is paving streets and building cement sidewalks.

A. V. Clubbs, builder and contractor, Pensacola, Fla.:

This ancient city has awakened from its Rip Van Winkle sleep, and our people are beginning to do things, and realize that, although we have one of the grandest deep-water harbors on the Gulf of Mexico and a climate that promotes the best health record in the country, these blessings alone do not promote prosperity, but with a United Progressive League on the lookout for new enterprises and ready to reach out and

help every legitimate enterprise, we are forging ahead and laying the foundations of a greater city. For the past year new sewers, street paving and cement sidewalks have been extended, and so popular have these improvements become that the property-owners, who pay the bills, have just voted for more bonds, which will bring us large additions of these civilizing influences. The cement sidewalks are spreading in every direction, and when present work is complete we will have 75 miles to our credit in two years' time. We have a number of large wholesale warehouses complete and doing business, while plans are out by the Avery Hardware Co. for a large structure on the water front that may receive heavy goods by sail on one side and transport over the Louisville & Nashville Railroad tracks to the interior from the in-shore side of their warehouse. We have new bank buildings, office buildings and city buildings, and our hotel, the San Carlos, all fireproof, and the city-owned water-works have been enlarged and improved and are yielding profit to the city. Ten-thousand-dollar residences are more numerous now than five-thousand-dollar residences were a few years ago. Our one great railroad system is preparing for coming events, and will have a passenger depot site beyond comparison, the best the city affords, 900 feet solid front and 192 feet deep, and this fronting on a street 100 feet wide, and to the east another 100-foot street, while to the west it is designed to have the main entrance to the proposed new depot on Alcaniz Parkway, which is 240 feet wide. We are not yet favored with any hint as to what the new depot will cost, but after securing such valuable property we may trust the liberal management of the Louisville & Nashville Railroad Co. for up-to-date improvements, as well as looking many years ahead into the future. This brings me to new railroad construction. Mr. Henry McLaughlin, who controls the Pensacola & Perdido Railroad, which has very valuable and extensive water-front property on the bay, is quietly building the Pensacola, Mobile & New Orleans Railroad, and expects to do business with Mobile early next year.

[Bearing upon this project of Mr. McLaughlin, the Pensacola *Evening News* says: "Talk about railroads brings up a realization of the fact that Mr. H. McLaughlin is now building a railroad through that section, without any assistance from the people of Pensacola, that will be of more value to the people of the city than any railroad that could be built. When this road is completed it will open up transportation with Baldwin county and the splendid agricultural territory between here and Mobile and will give Pensacola transportation connections at Mobile with the great railroads of the West. The value of Mr. McLaughlin's enterprise cannot be overestimated, and it will be a red-letter day for Pensacola when his road shall have been completed."]

St. Petersburg.

W. C. Henry, general contractor and builder, St. Petersburg, Fla.:

I have a brick bank at Tarpon Springs under way. It is for the Spring Exchange Bank. In St. Petersburg I have signed a contract for a \$30,000 high school, and just started to work this week. Several other brick and wood buildings are going up at this place, and not less than 25 to 40 are on the way now.

GEORGIA.

Atlanta.

Griffin Construction Co., engineer and contractor, Atlanta, Ga.:

We have under contract the following building construction in Atlanta: Pendle-

ton Building, reinforced concrete store building, five stories, 50x125 feet, \$40,000; 50 per cent. done; Armstrong Building, reinforced concrete store building, 100x100 feet, \$45,000; 30 per cent. done, and Winship Building, brick stores, two stories, 40x128 feet; 15 per cent. done.

Pittman Construction Co., contractors and builders, Atlanta, Ga.:

We have the contract for the M. L. Thrower building, this city, to be a business building constructed of reinforced concrete, outside walls to be of brick. It will be five stories high, with four electric elevators, steam heated, and to cost approximately \$75,000. The work is just started. We also have a two-story brick and stone dwelling for Pittman Construction Co. on Peachtree street, this city. This building will be vapor heated, tile roof and to cost approximately \$15,000; the work just started.

Augusta.

Geo. W. Wrenn, secretary and treasurer Blue Ridge Construction Co., Augusta, Ga.:

We have contracts on hand as follows: Augusta-Aiken terminal station, this city, \$42,000; this job is nearing completion, and will be finished in about 50 days; Jordan residence, cost about \$7000; this job is also being completed; railway passenger station, Waycross, Ga., cost \$35,000; this job is just starting. As to the future outlook, there is considerable work coming up in this part of the country, both in Georgia and South Carolina, and we are contemplating plenty of work for the balance of this year and all of next year.

Jackson.

Walter Washabaugh, general superintendent for Lane Bros. Company, contractors, Altavista, Va., at Jackson, Ga.:

This particular piece of work is the construction of the Ocmulgee dam for the Central Georgia Power Co., and we hope to complete it about November 1. It comprises a dam 100 feet high and about 1500 feet long. It is situated 45 miles from Atlanta, 44 miles from Macon, and about 7 miles east of Jackson, Ga. The work comprises approximately 150,000 of concrete.

Macon.

II. Stevens' Sons Company, Macon, Ga.:

During the current year we have furnished pipe for sanitary systems of sewers at Bartow, Perry and Quincy, Fla., and Newberry, S. C., for about seven miles each, all of which are practically completed. We have just commenced the delivery of pipe for eight miles of sewers in this city and 10 miles at Gaffney, S. C. It is our opinion that this class of work will increase as the population of the South increases and the cities grow, and, as a matter of course, will be preceded and followed by construction work of other character, as we believe our fair Southland is awakening to her opportunities and advantages.

KENTUCKY.

Brent.

Langhorn & Waugh, railroad contractors, Brent, Ky.:

We have a 1,100,000-yard contract, building a yard for the Chesapeake & Ohio Railway at this place. We are operating 70-ton Atlantic and Marion shovels, with both standard and narrow-gauge rolling equipment.

Lexington.

Frank Corbin, general contractor and builder, Lexington, Ky.:

We seem to have all we can do, and the prospects are good for small work, such as remodeling and dwellings in this city this year. I have under contract the following

work: Three-story-and-basement store building for G. A. Roy, cost about \$14,000; remodeling store building for Clark estate, cost \$12,000; dwelling, brick and stone, \$5000, and garage, two stories, 121x227 feet, Phoenix Motor Car Co., \$30,000.

Louisville.

Bailey & Koerner, Louisville, Ky.:

We have under way an office building for Louisville Water Co., cost \$55,000; a 16-room school and assembly hall; just broke ground for this. All amounts to \$150,000. Have just completed a theater for \$110,000. There are quite a number of residences going up, and there is also some street building here. The outlook is fair.

Falls City Construction Co., general contractor, Louisville, Ky.:

We have at present under way a 10-story bank and office building at Paducah, Ky., which is about 50 per cent. completed. We have a courthouse and jail at Marietta, Okla., the contract price of both being approximately \$61,000, which are about 50 per cent. completed. We also have a contract at Hereford, Tex., for a courthouse, the contract price of which is \$125,000. We have just started the construction of the last-mentioned contract. We closed on July 7 a contract for a courthouse at Brackettville, Tex., which we are just starting, and the contract price of which is \$44,500. We consider our prospects for future business very good.

LOUISIANA.

Jennings.

De Jersey & Barnard, contractors, Jennings, La.:

We are interested in municipal improvements only. We have recently completed two concrete sidewalks contracts, one for \$40,000 in Ruston and one for \$30,000 in Minden, both this State. We are engaged in constructing 14 miles of concrete sidewalk and 14 miles of concrete curbing in Jennings, La. The general outlook for municipal improvements in Louisiana is very promising, provided, however, certain laws governing such improvements can be amended, as nearly all of the small towns want to improve their streets and sidewalks.

Lake Charles.

Thrall & Shea, contractors, Lake Charles, La.:

In regard to work lately finished, in the course of construction and contracts secured for future, we have within the last week completed the rebuilding of the planning mill and power-house and stock store sheds for the Bowman Hicke Lumber Co., Loring, La., cost \$30,000; will complete within the next 10 days a complete plant for the Choctaw Lumber Co., Bismarck, Okla., consisting of sawmill, planing mill, power-houses, drykilns, stock sheds, electric plant, water system, offices, hotel and several houses, the contract for our work amounting to \$40,000; will shortly complete for the Keith Lumber Co., Voth, Tex., an addition and extension of its manufacturing plant consisting of rebuilding 150 feet of its old mill, adding 36 feet thereto, installing much new and up-to-date machinery to increase its capacity: cost \$45,000. We have about one-half completed for W. M. Ritter Lumber Co., Proctor, N. C., a double-band mill plant, new and complete, cost \$75,000. We will begin work within the next 10 days for the Crowell & Spencer Lumber Co., Long Leaf, La., rebuilding its whole plant; estimate of improvements, \$50,000. We have striven to give you an outline of business with us, and will say further that our business is back to where it was before the depression, and by the improvements being made the lumber men anticipate a brighter future.

New Orleans.

Jefferson Construction Co., New Orleans, La.:

We have the following contracts now under way: Metropolitan Bank building, cost \$250,000, to be completed November 1; Westfeldt store buildings, cost \$46,000, to be completed September 15; Loyola College, cost \$151,500, which we are just starting, to be completed July 18, 1911. While we have been fortunate in having enough work to keep our organization going for the past 12 months, at this time the outlook is not so bright, as we know of several buildings which have been held up or else withdrawn from the market since last spring. There has been some movement in real estate along the river front and various railroad lines in this city which we hope means that there will be some new factory buildings commenced here in the near future. Commencement of these enterprises depends largely on financial conditions and whether the tendency of building material is upward or downward. In view of all the existing conditions, we do not expect any very great building activity in this city for the balance of this year.

Geo. J. Glover, general contractor, New Orleans, La.:

The work I now have on hand is the new Whitney-Central National Bank building, which is nearing completion and will be completed in the next three months at a cost of approximately \$1,500,000. I have also just started on the Penick & Ford building, Amesville, La., which is a factory building and will cost approximately \$200,000. I am just completing the annex to the Krauss Company's building at a cost of \$50,000.

MARYLAND.

Baltimore.

Fisher & Carozza, general contractors, Baltimore, Md.:

We are working on the following contracts: Placing crushed stone in filter beds, for the Sewerage Commission of Baltimore, at Back River, this work costing about \$350,000; building three miles of the extension of the Western Maryland Railroad near Garrett, Pa., cost about \$90,000; macadamizing 3.2 miles of the Falls road from Mt. Washington to Brooklandville, Md., costing about \$56,000; drawbridge over the Choptank River, near Easton, Md., with about one mile of embankment across the marsh on the Caroline county side, costing about \$32,000, and small tunnel at Delta, Pa., for the Baltimore-Peach Bottom Slate Co., costing about \$10,000. Of these contracts, the latter is the only one nearing completion; the others have some time to run.

Federalsburg.

R. W. Messinger, Federalsburg, Md.:

My partner and I have recently completed a contract for a piece of State-aid road, which was an \$8500 job, and are now engaged, in connection with the Luton Bridge Co., in a \$17,000 job of road, street and bridge work; in addition to this, road work in and near Federalsburg, in which we are participating, the Holt Construction Co. has a \$27,000 contract for State road leading from Federalsburg toward Denton. The outlook is good for plenty of work in the future in the road construction line, so far as this vicinity is concerned.

MISSISSIPPI.

Como.

T. W. Beall Company, general contractor and builder, Como, Miss.:

We have Mr. H. B. Fitch's stores here, one story high. Mr. T. Thomas of Batesville has closed a contract for five one-

story-high stores and one bank building, to cost in all about \$20,000. Marks, Miss., is going to build a courthouse some time in the near future, and is now contemplating selling \$33,000 worth of bonds for that purpose. The general outlook, taking in all the rain we have been having, prospects are fairly good. The Lambert (Miss.) school is about halfway ready for the last joist; also the Shelby schoolhouse. Both are brick buildings. The one at Lambert cost \$6000 and the one at Shelby \$10,000.

Hattiesburg.

Burkes Bros. & Fleming, contractors and builders, Hattiesburg, Miss.:

Mr. J. S. Brock, Jr., of Franklinton, La., awarded contract to us for the construction of a two-story brick store and office building, pressed-brick front; cost \$6000. Work began on the 21st inst.

Jackson.

F. B. Hull Construction Co., Jackson, Miss.:

In regard to private work, we do not think the conditions throughout the country are as good as they were a year ago. We do not notice as many storehouses and residences going up now as there were then. The continued rains have assured a fine corn crop in our section, but the cotton is very unpromising, about as poor as the writer has ever seen, and he has had 35 years' experience in raising cotton. Fifteen cents does not look any too good for November cotton. Thirteen million bales will be a big crop if the country generally compares with Arkansas, Mississippi, Alabama and Tennessee, where the writer has been in the last three weeks.

Magnolia.

Xavier A. Kramer, consulting engineer and architect, Magnolia, Miss.:

In this immediate section improvements that were proposed a year ago are now being delayed on account of the unsettled conditions caused by the advent of the boll-weevil. I am making plans, however, for a few towns, among which are Cleveland (Miss.) water-works, \$20,000; Oskaloosa (Miss.) water-works and electric-light plant, \$20,000, and Hartselle (Ala.) water-works and electric lights, \$28,000. Have about completed water-works and electric-light plant at Ackerman, Miss., \$35,000, and have begun water and sewer system in Kissimmee, Fla., \$45,000. Will let contract for Amite City (La.) high-school building on August 1 to cost about \$25,000, and have about completed the Lampton Company warehouse at Columbia, Miss., cost \$10,000.

Natchez.

O. A. Gibson, general railroad and levee contractor, Natchez, Miss.:

I recently finished the United States Government levee in Louisiana, and moved the 200-mile plant to Shiloh, Miss., on a 1,000,000-yard contract taken from the Mississippi Levee Board, domiciled at Greenville. The United States Engineers, in charge of Captain Smith at Vicksburg, will let on the 21st some 1,200,000 cubic yards of levee work. Some 800,000 yards of this are near Shiloh, Miss., the rest in Louisiana and Arkansas. This is the season that the annual awards are made. Railroad construction in Mississippi is at a low ebb.

MISSOURI.

Kansas City.

Crites & Beatty, general contractors, Kansas City, Mo.:

We are general contractors, and have under construction work amounting to approximately \$250,000. The business in the building line looks good in this section of the country, and promises to be a good fall in this line of business. Every indication at present seems to be more favor-

able than at the present time last year. Our work is principally public work, and in that line my opinion is there will be more this fall and coming year than at present and the past year.

Geo. L. Brown & Son, general contractors, Kansas City, Mo.:

The following is a brief statement of our present contracts: Building for Armour estate, seven stories, part mill construction, part steel construction, with reinforced concrete floors, terra-cotta front; will be used exclusively by retail grocery company; cost \$100,000; contract about one-half completed; Rialto Building, 15 stories, 96x115 feet; steel skeleton; floors either reinforced concrete or tile construction; terra-cotta for exterior; six high-class passenger elevators; building will be equipped with all modern conveniences; high-class plumbing; considerable marble and tile work in corridors and halls; iron stairways; plate glass for exterior; fireproof windows for exposed portions; marble floors throughout; interior finish of cabinet construction. The only portions of this work already let are excavation, foundations and structural steel. The contracts for everything else await awarding. This work will be ready for the structural steel inside of two weeks, foundations and excavations being about completed; cost of building, \$700,000. In regard to general outlook, we believe that building operations will be comparatively quiet, at least for the remainder of this season. There has been a general slackening up in the construction of residences, flats, apartments, etc., owing to the tightness of the money market. Larger constructions also are held back for the same reason. This condition seems to apply also to our surrounding territory. We consider our local conditions, however, fairly good, as with the assurance of good crops we believe that building will be fairly active.

Marshall.

E. R. Page, contractor and builder, Marshall, Mo.:

I have on hand now one residence costing about \$7000; am just finishing a fair grounds for Saline county consisting of barns, grandstand, one-half mile track, cost \$15,000; two brick store buildings, cost \$12,000. I am figuring on following jobs now: Addition to church, about \$8000; Eagle clubhouse, cost \$15,000; Missouri-Kansas Telephone Co. office building, cost about \$15,000. Work has not been very brisk here this season, but a good many talk for next spring. We have a \$100,000 shoe factory and \$30,000 city hospital move on, and both are about closed up now, but no building until next spring on same.

Sedalia.

T. H. Johnson, general contractor, Sedalia, Mo.:

The outlook in this section for the next 12 months is good. We are building three miles of rock road, and the commissioners have more than \$30,000 more to invest in rock roads in the next 12 months, which will build about seven miles more. We are also building a high school at Windsor, Mo.; a bank at Fayette, Mo., and a bank at Sedalia, the cost of these being \$15,000, \$13,000 and \$17,000, respectively. There are also three new schoolhouses to be built here in the next 12 months, to cost \$65,000, and a Y. M. C. A. building to cost \$50,000, besides minor buildings, such as small residences, etc. There are also considerable amounts of street improvements being done, and more brick pavement has recently been let by the Council. Harter Milling Co. is erecting a \$6500 warehouse, and Woman's Building is under construction at the Missouri State Fair grounds at this place. All of the above work is fairly under way.

St. Louis.

S. R. H. Robinson & Son Contracting Co., St. Louis, Mo.:

We have three contracts under way at the present time: One for the Pulaski County Drainage District No. 1 at Argenta, Ark. This work consists of reclaiming several thousand acres of land. Argenta is directly across the Arkansas River from Little Rock, and the land reclaimed affords excellent opportunities for manufacturing sites by reason of the Cotton Belt, Iron Mountain & Rock Island Railroad penetrating the district. This contract involves an expenditure of upward of \$150,000, and is near completion. One for grading 11 miles of road bed for the Cairo & Thebes Railroad between the cities of Cairo and Thebes, Ill. This contract involved an expenditure of \$100,000. One for the East Side Levee and Sanitary District, headquarters at East St. Louis, Ill., for the construction of diversion channel for Cahokia Creek, which overflows repeatedly, doing many thousand dollars damage to property-holders both in East St. Louis and adjacent territory. This channel taps the creek some 20 miles above East St. Louis by means of a 100-foot channel, and large levees divert the water direct into the Mississippi River 15 miles north of the city, reclaiming the rich land known as the American Bottoms. This contract embraces an expenditure of \$275,000. There is considerable construction work of all kinds going on in this territory, and it is difficult to find either an idle man or team.

Ely Guentert, Guentert & Burns, architects and builders, St. Louis, Mo.:

From the building permits published in the *Daily Record* I would say that the permits for buildings this year fall below 1909 up to this date about 15 per cent., while the street and sewer work, I think, will gain that much. There seems to be quite a large amount of St. Louis capital going to Oklahoma and Texas to be expended in building operations. Notwithstanding the adverse reports on the crops, those two States seem to be building up rapidly and money is plentiful. The writer just returned from a trip south, and found everything lively, with no immediate prospect of a let-up. The outlook for fall work in St. Louis and nearby towns is good. I think the year's end will compare favorably with any we have had since the World's Fair year. St. Louis voted about \$8,000,000 a year or so ago for a free bridge and municipal buildings.

Rich Construction Co., St. Louis, Mo.:

We have completed the main outlet concrete sewer at Cairo, Ill., the length of which is about 10,000 feet. The contract price is \$108,800. There is 450 feet of reinforced six-foot sewer, 1550 feet of six-foot sewer, 3000 feet 5½-foot sewer, 1500 feet 4½-foot sewer, 3000 feet four-foot sewer, 100 feet four-foot sewer outlet into the Ohio River, which was placed at zero, which means that the gauge stood at one foot, which happened once in the history of Cairo. The pump is supposed to pump 1,000,000 gallons every five minutes. We had to use steel sheet piling, as we had from 10 to 12 feet of quicksand to contend with. The city of Cairo being so much lower than the river, it was quite a difficult piece of work. The outlook in our section, especially in St. Louis, for construction work is very good, indeed.

F. W. Terpening, secretary and general manager Trinidad Asphalt Manufacturing Co., St. Louis, Mo.:

So far as St. Louis and vicinity are concerned, the conditions are extremely favorable. Construction work, such as building operations, municipal work, street paving,

etc., is excellent. We have plenty of work contracted for, and will be very busy until the end of the year.

NORTH CAROLINA.

Asheville.

M. H. Kelly, contractor for water, gas and sewer work, Asheville, N. C.:

I have just completed a \$60,000 reservoir, sewer and water contract at Canton, N. C., the business outlook there being very good. I have also completed a similar contract at Murphy (\$42,000), and have just closed another there for \$12,000. They are about letting further work for sidewalks and streets to the amount of \$25,000 or \$30,000, and I should think there are buildings to be constructed and in course of construction to the amount of \$150,000, the outlook there being generally very bright. I have also a sewer and water contract for the city of Asheville for \$12,000, and the authorities are spending about \$200,000 on street improvements. There are a large number of buildings going up, and prospects are very good here in all lines.

Charlotte.

Porter & Boyd, general contractors, Charlotte, N. C.:

We have considerable work in progress, and think conditions indicate a great deal more building activity in the next few months. We have in progress the following contracts: Foundry building for Yarbrough & Bellinger, Charlotte, reinforced concrete, fireproof, cost \$10,000; residence for J. S. Lemond, brick, slate roof, hardwood finish, cost \$8000; grading for depot site and for track to compress at Athens, Ga., \$15,000; highway bridge over railroad tracks, Greenville, S. C., \$14,000, concrete piers being built.

Wheeler & Stern, architects, Charlotte, N. C.:

We take pleasure in listing below the work we have produced since the first of this year: Plans completed: First Baptist Church, Shelby, N. C., cost \$35,000; First M. E. Church, Weldon, N. C., cost \$25,000; First M. E. Church, Burlington, N. C., cost \$35,000; First M. E. Church, Mt. Gilford, N. C., cost \$14,000; Cherokee Avenue Baptist Church, Gaffney, S. C., cost \$25,000; Southside Baptist Church, Spartanburg, S. C., cost \$25,000; residence, Hickory, N. C., cost \$12,000; residence, Gaffney, S. C., cost \$9500; residence, Rockingham, N. C., cost \$10,000; county jail, Rockingham, N. C., cost \$17,000; county jail, Wentworth, N. C., cost \$16,000; stores, Tarboro, N. C., cost \$7500; offices, Monroe, N. C., cost \$7000; offices (alterations), Statesville, N. C., cost \$10,000; parsonage, Moultrie, Ga., cost \$10,000. Plans under way: First Baptist Church, Millen, Ga., cost \$20,000; Bethel M. E. Church, addition, Spartanburg, S. C., cost \$12,000; West End M. E. Church, Winston-Salem, N. C., cost (approximately), \$45,000; total, \$335,000.

Greensboro.

Hollady & Crouse, contractors and builders, Greensboro, N. C.:

We have in progress at present and nearing completion an office building in Greensboro, N. C., for the Fisher estate, costing about \$50,000; an addition to the M. E. South Church, costing about \$20,000, and a postoffice building in Fayetteville, N. C., costing about \$55,000. Work seems to be looking up considerably in this section. At present we are not starting any new contracts. There is to be a Y. M. C. A. building erected in this city soon; F. A. Weston, architect.

Central Carolina Construction Co., Greensboro, N. C.:

We have on hand following contracts: Salisbury, N. C., store building, \$50,000;

Greensboro, N. C., infirmary building, \$40,000; Winston-Salem, N. C., bank building, \$120,000, and Greenville, N. C., courthouse and jail, \$80,000. Besides, we have small jobs in our own home town. The work this year as we see it has not been as lively as we expected it to be, although we have no room to complain. From our business experience in the South it looks to us as though the South is the coming part of the country, and we see no reason why it should not grow faster than it is at present.

HENDERSONVILLE.

The Star Dray Co., contractors and builders, Hendersonville, N. C.:

The street grading and cement sidewalks of this place, started the latter part of March, are well under way. The Government has appropriated \$70,000 for a post-office building here. It is rumored that the Presbyterian Seminary will be moved here from Columbia, S. C., to a tract of land just outside the limits recently purchased by a colony of Presbyterians of Columbia, S. C. The Rhett property of Flat Rock, N. C., three miles from this place, has been purchased by Birmingham (Ala.) capitalists, and will be converted into a club with an expenditure of about \$80,000. Rail will be on the ground at Rosman, N. C., for railroad now under construction for Eugene A. Schaffer up the Middle Fork of the French Broad River. The new \$10,000 concrete water filter being installed by the Roberts Filter Co. of Philadelphia is just about completed. There is a move on foot for a bond issue of \$100,000 for road improvement in this (Henderson) county.

Lexington.

W. Lee Harbin, general contractor and builder, Lexington, N. C.:

There is not much going on at this time. I have only one contract, that is a \$30,000 Baptist church at Shelby, N. C., and all materials are contracted for. I have a bid on 15 depots for Winston-Salem South Bound Railway, which was to have been let on the 15th.

Raleigh.

York & Cobb, general contractors, Raleigh, N. C.:

We have on hand work that has been started within the last 60 days, and work that has not yet been started as follows: State school building, cost \$50,000; exhibition building, State Fair grounds, cost \$7000; storage sheds for tobacco company, cost \$7500, and Country Club, cost \$15,000. Will state that we find the building business pretty active in some places, and in others there is practically nothing doing. Taking it as a whole, will say there is pretty good lot of work through this section of the State.

OKLAHOMA.

Hobart.

Marlow Construction Co., Hobart, Okla.:

We have now under construction two school buildings for this city, the cost of which is \$58,000, exclusive of the heating and plumbing. We expect to complete these contracts by the 10th of August. As to future prospects, they look good to us. My reason for seeing this way is from the fact that all the brick plants in this section are busy, and some of them have orders for as many as a million brick ahead. Another reason is that it is almost impossible to secure a contract from a lumberman to furnish an extensive bill at any given time.

Lawton.

J. N. Mayfield, vice-president Kerby-Mayfield-Shaw Engineering & Construction Co., Lawton, Okla.:

There is a reduction in construction for Oklahoma prevailing at this time. We do not know directly where to apply the deficiency. We are constructing water-works

at Weatherford, Okla., and at Fort Sill, Okla., which are nearing completion. There will be under construction in the near future a \$175,000 sewer and water-works dam for the city of Lawton, Okla. A street railway, cotton factory and State agricultural college are under construction now. The outlook looks very quiet to us for the future.

Shawnee.

Higgins & Furnas, contractors and builders, Shawnee, Okla.:

As to the outlook for building in our section, we think it pretty good. At the present it is a little dull. We have a contract for the State Baptist University building for \$100,000 to start 1st of August; also we have a contract with S. H. Kress for a building costing \$12,000.

SOUTH CAROLINA.

Estill.

George B. Clarke, contractor, Estill, S. C.:

I am now building a bank at Furman, S. C., to cost about \$2000. I am just beginning an addition to schoolhouse at Garritt, S. C., to cost \$1000.

I notice on page 92 of your issue of July 7 "Location wanted for machine shop, foundry, etc." I would advise the party to see what the chances are at Estill. We have a fine county, two railroads, Seaboard Air Line and Southern, and our water can't be beat. Sink a well 800 or 900 feet and the water will go up about 100 feet.

Gaffney.

The Builders' Supply Co., Gaffney, S. C.:

This town is now putting in a sewerage system and extending its water plant, costing \$125,000; also a new Second Baptist Church is now under course of construction, costing \$18,000. There are quite a number of small cottages going up all over the city, and the outlook for the balance of this summer and this fall is very encouraging. This has been the best building year we have had in a good many years.

TENNESSEE.

Chattanooga.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.:

While we do not do contracting work, we sell a great deal of material throughout the South, and are in pretty close touch with conditions for that reason. Business in building lines on the whole has been very satisfactory this year. Owing to the weather, certain sections of the South have not been so good, while other sections have been above the average, bringing about on the whole a reasonable average.

Noll Construction Co., general contractors, Chattanooga, Tenn.:

We are building what is known in Chattanooga as the Chattanooga Creek System of Intercepting Sewers. This is a sanitary sewer of 36-inch concrete pipe that intercepts some smaller sewers to take them out of Chattanooga Creek and convey the sewage to the Tennessee River. This is a very difficult job, as the cutting is from 25 to 35 feet deep, and goes under numerous lines of railway, which we have to tunnel. This job will cost the city about \$100,000, and we have same about half completed. We also have in course of construction about \$50,000 worth of street paving for the city of Chattanooga, and are also building the Rossville boulevard for Hamilton county, from the corporation limits of the city of Chattanooga to the State line near Rossville, Ga. This boulevard is 80 feet wide, and is to be paved with asphalt macadam. The grading on this job amounts to about 70,000 cubic yards. The main roadway is to be 50 feet wide, with 15 feet on each side for sidewalk, curb and gutter.

The sidewalk is of cement and the curb and gutter is a combined cement curb and gutter. We expect to have this road finished by October 1. The cost of this boulevard will be about \$100,000.

Columbia.

Hugh D. Merrill, contractor, Columbia, Tenn.:

The prospect for work here was never better, though most of the work is for small houses, ranging from \$1500 to \$3500. I have just finished foundation for a six-room bungalow for B. F. Watkins to cost \$2500. Will lay off foundation for five-room cottage for Mr. George Cranford to cost \$1800. Mr. C. H. Sharp is having plans made for a \$12,000 house, veneered press brick, and am figuring on a \$12,000 brick 12-room house for Preston Taylor of Nashville. Mr. O. T. Telly is having a 12-room brick residence built. The city is spending \$15,000 for sewer work and \$20,000 for concrete pavement and street work. The water-works and gas plant company is spending \$5000 on water mains.

Knoxville.

Brimer & England Bros., contractors and builders, Knoxville, Tenn.:

There is but little activity in building construction here in Knoxville, and prospects are not encouraging for any improvement before the first of next year. The Holston National Bank of Knoxville will erect a 12-story banking and office building here next year. Plans have been made for a 10-story annex to be built by the Miller Store Co., and contracts will be let in time to begin work the first part of next year. We have recently finished the main or administration building for the Appalachian Exposition Co. at a cost of about \$40,000. This sum was one of the largest contracts let here this year. We have only a few small contracts under way at present, and will take but a short time to complete them.

L. A. Galyon, contractor and builder, Knoxville, Tenn.:

I have some work going on at present that might help you in summing up our work in this city. One job, and the most important one, is the Eastern Hospital for the Insane, situated at Lyon's View. This work is being pushed, but it will be quite a while before it is completed. The contract was \$40,000. I have almost completed the Forestry Building for the Appalachian Exposition, and in addition have the main entrance and the Woman's Building. They are going to let the contract for the County Building in the next week, and they hope to keep the contract within the appropriation, which is \$5000.

Memphis.

F. L. McKnight, Memphis, Tenn.:

I have on hand at present one 20-room flat building, cost \$14,000. I consider the outlook for this section of the country good.

TEXAS.

Austin.

J. O. Polhemus, general contractor and builder, Austin, Tex.:

I have some work at the insane asylum, additions amounting to about \$18,000, but it is tied up now on account of State funds. Sanguinet & Staats are to let a 21-story at Waco. Waller, Shaw & Feild have let a high school at Marshall, Tex. Port Lavaca is wanting a courthouse.

Caldwell.

J. R. Hartgraves, building contractor, Caldwell, Tex.:

I have under construction now two store buildings at Cameron, Tex., cost \$4000; one-story school building at Lexington, Tex., cost \$9000; two-story Masonic Temple, Bryan, Tex., cost \$12,000; repairs on

courthouse at Anderson, Tex., cost about \$4000. I don't think the outlook very good just now, but the crop conditions are not very good at present. This can, however, change in a short time by having a good rain, which is very badly needed now.

Dallas.

L. R. Wright, contractor and builder, Dallas, Tex.:

The outlook is good for construction work, but is a little slow at present. The contracts that I have on hand are as follows: Gonzales postoffice, Gonzales, Tex., price about \$43,000; apartment-house, Wichita Falls, Tex., price about \$26,000; Southwestern Telegraph & Telephone Co.'s South Dallas exchange, price about \$30,000; Westminster Presbyterian Church, superstructure, price about \$14,000; remodeling Southwestern Telegraph & Telephone Co.'s building in Oak Cliff, Dallas, Tex., price about \$6000. As I have mentioned before, the outlook is very good for construction work in Texas.

El Paso.

Sorenson & Morgan, contractors and builders, El Paso, Tex.:

I am glad to say that the volume of business has increased a great deal in the past eight months. At the present writing we are erecting two buildings, one five stories and the other six, both reinforced concrete throughout. The six-story building we started about seven weeks ago, and are now on the sixth story; the same building will be completed in about six weeks more. In regard to the other, we will complete it in about 60 days. At the present writing these are the only large contracts that we are carrying.

Fort Worth.

Kuhlman & Blue, paving contractors, Fort Worth, Tex.:

We have on hand the following street-paving contracts in this city: Alston avenue, rock asphalt, nearly completed, \$31,136; Terrell avenue, rock asphalt, nearly completed, \$8942; Bessie street, rock asphalt, under contract, \$27,200; Elizabeth street, rock asphalt, under contract, \$5389, and Kentucky avenue, rock asphalt, under contract, \$9624. In our judgment, conditions in this vicinity are very flattering for all classes of municipal improvements, but house-building prospects are not so good as in the past six years; however, crop conditions being fairly good and a continual stream of immigrants coming to the State, there is no reason why the future should not look good.

Houston.

The J. W. Maxcy Company, designing and contracting engineers, Houston, Tex.:

We have on hand the following operations: Road and storm-water sewers, Bowie county, Texas, amounting to \$400,000, about 30 per cent. completed; Brownwood, roads and bridges, \$100,000, about 60 per cent. completed; Cooke county roads and bridges, \$100,000, actual construction not begun; Dalworth municipal improvements, water-works, sewers, lights and streets, \$50,000, actual construction work not begun, and Altus, Okla., water-works, sewers and electric lights, \$200,000, just begun. There are a great many big projects being pushed in Texas at the present time, and we anticipate a season of the greatest activity for the next year.

Fred A. Jones Building Co., Houston, Tex.:

We have the following buildings under construction: Ross apartments, \$350,000, walls up to roof; Sunset Hospital, for the Southern Pacific system, \$250,000, walls up to second floor level; Bender Hotel, 10 stories, half-million-dollar project, foundations in and steel contract let. No other

subcontracts let. Outlook couldn't be better.

San Antonio.

H. D. Rheiner & Bro., general contractors and builders, San Antonio, Tex.:

We have just closed for three officers' quarters for the Government; contract price \$65,000.

R. O. Langworthy, architect and builder, San Antonio, Tex.:

I now have on hand a contract for the erection of a church building in San Antonio, Tex., which will cost about \$6000, which is to have concrete basement and frame superstructure. I also have a contract for an addition to a residence to cost about \$2500, which is just commenced, and have just completed plans for store and residence combined which will cost about \$3000. This contract has not yet been let. I am of the opinion that building construction will be quite brisk this fall, commencing about September 1 in this city and vicinity.

H. L. Scott & Co., architects and builders, San Antonio, Tex.:

Most of our work at present is in the new town of San Jose, which is in reality a suburb of San Antonio, and only two miles distant. In this town we have nearing completion a 40-room hotel costing \$30,000, and have contracted for and will start in the next 30 days a restaurant costing \$6000; a rooming-house costing \$12,000; a hotel costing \$300,000; bathhouse costing \$100,000; a railroad station costing \$10,000; a brick office building costing \$10,000, and four residences costing from \$5000 to \$7000 each. The townsite is located on the San Antonio, Tampico & Rio Grande Railroad, which is now under construction, and will run from San Antonio to Tampico, Mexico. We have under construction here in San Antonio six residences, ranging in price from \$5000 to \$8000 each. With reference to the outlook here, will state it is very bright, indeed. The homesellers and capitalists are flocking in here by the trainloads, and very few of them go back without investing; as a result the population of our city is increasing at the rate of about 20 per cent. per annum, and Southwest Texas, from here to the Rio Grande, is rapidly being converted from big stock pastures to farms and towns.

Texarkana.

J. D. Johnson, general building contractor, Texarkana, Tex.:

The following work is going on in this vicinity: Texarkana, Tex.—The Leary & Norwood building is nearing completion, cost \$9300; S. H. Kress & Co. are receiving bids for the erection of a two-story-and-basement brick store building, cost about \$25,000; L. Longinatti awarded contract to erect two-story brick store and lodge building, cost \$5000; the Pine Street Presbyterian Church contemplates making improvements on edifice to cost \$9000, Witt & Seibert, architects. Texarkana, Ark.—School Board, A. B. Little, secretary, contemplates erection of fireproof high-school building; bonds voted; site not selected. Ashdown, Ark.—Plans are out for estimates on a three-story-and-basement brick hotel; estimated cost \$30,000.

VIRGINIA.

Harrisonburg.

The J. S. Heatwole Co., Inc., contractors and builders, Harrisonburg, Va.:

The building operation in our town and community is fair. While there are not as many buildings being erected as were last year at this time, the ones that are being built are of a better class. Business of all kinds is about normal. We have under contract at the present time following buildings: Dormitory building for

Bridgewater College, Bridgewater, Va., about 50 per cent. completed; city school building, Luray, Va., about 25 per cent. completed; colonial residence for Dr. Turner, Harrisonburg, Va., 75 per cent. completed.

Lynchburg.

Heard & Cardwell, architects, Lynchburg, Va.:

Building activity is fair, with a possible good increase this fall. Building operations in our office are Baptist church at Altavista, Va.; residence, C. N. Hancock, Lynchburg, Va.; residence, James Adkins, Lynchburg, Va.

Norfolk.

A. J. Reynolds, contractor and builder, Norfolk, Va.:

I have on hand four small dwellings, costing about \$2700 each, some of them under roof, some just starting, some about ready for the roof. The outlook here is very good. We have under construction a church to cost about \$100,000 and a high school to cost \$250,000, and a Young Men's Christian Association building to cost something over \$100,000, and are about to start a million-dollar depot, besides a great many smaller buildings. Altogether we are doing a fine business in the building line, and the future looks all right to me. We have a live and growing city.

Richmond.

C. W. Davis & Bro., general contractors and home builders, Richmond, Va.:

Our work consists almost exclusively of dwelling-houses, of which we build from 60 to 100 yearly. Below we give you the names of a few of which we have in progress, amounting to over \$5000 each: C. W. and J. Lee Davis, five dwellings, cost \$20,000; C. W. and Lee Davis, six dwellings, cost \$28,000; Mrs. J. Mason Miller, two dwellings, cost \$8000; Wm. E. Brumble, one dwelling, cost \$6000; St. Andrew's Ass't, two dwellings, cost \$6000, and Ashby B. Pyle, two flats, cost \$7500. We are constructing from 10 to 12 smaller buildings, ranging in price from \$1500 to \$3500 each.

Roanoke.

T. W. Kirkbride, Inc., general contractors and builders, Roanoke, Va.:

The following are new contracts which we are just commencing work on: \$30,000 Railroad Y. M. C. A., Crewe, Va.; \$6000 Railroad Y. M. C. A., Clare, O.; \$35,000 miners' houses for the United States Coal & Coke Co., Gary, W. Va.; 41 bridges for the Elk River & Little Kanawha Railroad, Gassaway, W. Va., about \$40,000, and five miles of grade and masonry for Elk River & Little Kanawha Railroad, Gassaway, W. Va., \$25,000. The outlook is very good in this section for new work.

Carpenter & Boxley, railroad contractors, Roanoke, Va.:

On the Norfolk & Western Railway in West Virginia we have one contract at Huger, change in line, which includes the driving of two double-track tunnels, one single-track tunnel, and raising the grade and lining an old single-track tunnel, with about 260,000 yards of excavation, mostly all rock, about 20,000 yards of concrete work; approximate cost about \$400,000. We also have three and one-half miles of double track for the Norfolk & Western Railway near Glen Alum, W. Va. This consists of about 250,000 yards of excavation, mostly rock, and one bridge; approximate cost about \$150,000. Work on both of the pieces of work in West Virginia is progressing nicely. All of this work is to be finished by June, 1911. We have a contract with the Virginian Railway near Pembroke, Va., for furnishing about 500,000 yards of ballast for track. This work is progressing nicely, having in two Gates crushers, crushing from 600 to 1000 yards

per day. About 33 per cent. of this work is done. We have at Thirteen, Ky., a lock and dam for the United States Government; cost of work already let to contract, about \$275,000; progress on this work has been good, and about 66 per cent. of it has been finished, and we are hoping to finish the excavation and masonry by December 25. We also have a small contract for lining a 700-foot tunnel with concrete for the Seaboard Air Line Railway at Divide, Ga. Machinery has all been shipped to this place and erected, and we expect to get the work finished by October 1.

Round Hill.

A. J. Simpson, contractor and builder, Round Hill, Va.:

I am very busy building, remodeling, putting in acetylene lighting plants, water-works, plumbing and heating in various localities in this vicinity at present. I have just begun two dwelling-houses in Leesburg, Va., for Oscar Hanvey, costing about \$3000 each; one office building for H. C. Gibson in Leesburg, Va., about \$3000; have a bank building in Hamilton, Va., for which I am architect; am also constructing it; price, without safe and vault, about \$6000; have just completed a garage for Thos. M. Gale, Bluemont, Va.; have numerous other smaller contracts.

Virgilina.

Virgilina Contracting Co., engineering and contracting, Virgilina, Va.:

This company has contracts in Granville county, North Carolina, which are very nearly completed. We have built about 40 miles of road in this county. We also have contract for 28 miles of gravel road near Emporia, Va. The two contracts named above were taken in the name of T. W. Chandler & Co. Another contract was taken in the name of Robert G. Lassiter for the construction of 33 miles of gravel road near Fredericksburg, Va. Work on this is just commencing. All the business of this firm and the three partners will be conducted hereafter in the name of the Virgilina Contracting Co.

WEST VIRGINIA.

Bridgeport.

The Union Planing Mill Co., Bridgeport, W. Va.:

We have just completed one dwelling costing \$7000 and one costing \$1150. We have near completion two \$2000 dwellings and two \$1000 dwellings, and have under contract two \$1200 dwellings and one schoolhouse to cost \$3000. A schoolhouse costing \$15,000 has just been completed. The outlook here is good. A number of buildings will be erected during the season. Several houses costing from \$5000 to \$7000 have been completed during the early part of this year.

Martinsburg.

W. H. Frankenberg, contractor and builder, Martinsburg, W. Va.:

The outlook was never better than now. I have just begun the following three buildings: Three-story brick warehouse, slow-burning construction, for Kilbourn Knitting Machine Co., costing \$20,000; three-story addition (brick) to Stewart Vehicle Co., costing \$5000, and two-story garage for W. E. Minghim, cost about \$4000. I have also at present about \$5000 worth of repair work on the Old National Bank of Martinsburg.

Building at Raleigh.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., July 25.

The total value of building improvements now under way or provided for in Raleigh is \$955,000, and this is regarded as a very good showing. A contract has been awarded for improvements at the gas plant, to cost \$20,000, including a holder to contain 150,000 feet. Richard F.

Giersch has accepted a design for a new hotel, and the specifications are now being prepared. The contract is to be let in 90 days, and work is to begin March 1. The cost will approximate \$90,000. The building will be of reinforced concrete, and the trimmings will be of terra-cotta. It will be seven stories high, with a roof garden, and will stand one square from the State Capitol.

The Yarborough Hotel, built about 1840, is to be rebuilt, work to begin in September, and about \$60,000 will be expended by the Grimes Realty Co. upon this improvement. The Hotel Raleigh, owned by Howell Cobb (the lessee of the Yarborough), will shelter the guests of the latter house while improvements are in progress. Mr. Cobb is expending \$25,000 in improvements on the Hotel Raleigh.

Instead of expending only \$200,000 on the extension of its plant here, the Carolina Light & Power Co. makes the amount \$250,000. The new barn for cars will be very spacious, and of the best type of construction, and much additional land has been bought for the location. Machinery is rapidly arriving and being installed.

FRED A. OLDS.

COTTON BILLS OF LADING.

Plan of a Conference of Bankers and Railroad Men.

As the result of several conferences which have occurred between those representatives of the New York city banks, which heretofore have been large purchasers of bills of lading representing cotton for export, and those acting for several railroad companies operating in the Southwest it has been determined to send the committee to England and the Continent and submit to the interested purchaser on the other side a plan which is given below in detail, and under which it is hoped that the cotton crop soon to be marketed can be financed without serious delay.

"At a meeting held today of the committee of bank officers that have been negotiating with the railroad officials on the subject of foreign and domestic bills of lading the following plan covering through order notify bills of lading was adopted:

"Your committee appointed to consider the form of certificate to be attached to order notify bills of lading for export cotton and the method of their use recommends the adoption of the certificate in the following form and the following uniform regulations in respect to the issuance of such bills of lading:

(To be attached to Order Notify Bills of Lading for Export Cotton Issued by Agents of this Company.)

Bill of Lading Signature Certificate No.....

The.....Railroad Company hereby certifies:

That.....is its regularly appointed Agent at....., and as such is authorized to sign Bills of Lading in accordance with the regulations of this Company, and that the signature on the attached order notify bill of lading No....., dated.....(Place of Issue.....)(Date)....., covering.....Bales of Cotton marked.....is his signature.

(Date).....

"We recommend that certificates be handled in the following manner, to wit:

"That they be issued in book form, with original, duplicate and stub and numbered consecutively, and that they be prepared by each company on paper bearing its own water-marks or color-tint protective devices. It is suggested that a uniform size of four (4) inches in width and six (6) inches in length be used. The certifying representative will attach the certificate to the bill of lading with mucilage or paste or an irremovable metal fastener.

"The certificates will be issued to the agents in the same manner as passage tickets, and the same check shall be made



PROPOSED UNION STATION FOR TAMPA, FLA.

Illustration represents accepted plan; buildings, etc., to cost \$250,000; architect, J. F. Leitner, Wilmington, N. C.; for Atlantic Coast Line, Seaboard Air Line and Tampa Northern Railways.

of these documents in agents' hands as of passage tickets.

"On the date of issue the agent will forward to the accounting department the duplicate certificate, with a non-negotiable copy of the bill of lading. The bill of lading, in addition to its own number, shall bear the number of the bill of lading signature certificate, which is issued in connection with it.

"The agent affixing the signature certificate to the bill of lading shall, in addition to signing and dating the same and keeping a record of the number, the date and the quantity of cotton called for by said bill of lading and certificate, stamp the same partly on the bill of lading and partly on the certificate in such manner that tampering or irregularity would be apparent.

"Spoiled certificates shall be immediately cancelled and returned to the auditor, with report.

"It is further recommended that through export bills of lading be issued upon the following conditions:

"Agents are to be instructed not to sign bills of lading until the cotton is in possession of the railway company.

"It being understood that cotton bills of lading may be issued on loading certificates certifying that cotton is loaded in cars designated by initials and numbers, issued by duly authorized agents of compress or warehouse companies that have executed the usual contract and bonds with the railway company, but not otherwise.

"Bills of lading will be issued only by agents or other representatives of the company, who are duly authorized to do so.

"Only one original bill of lading shall be issued for each shipment. The practice of issuing duplicate and triplicate bills of lading will be discontinued, but as many copies as are reasonably required may be issued, provided they are endorsed 'Copy, not negotiable.'

"The number of bales of cotton and the marks shall be written in pen and ink in the original bill of lading, and not inserted with typewriter or any other manner.

"There shall be no additions, erasures or changes in bills of lading.

"Bills of lading will be issued in serial numbers, beginning with No. 1, at each issuing station on the 1st of September of each year. All copies of bills of lading shall bear the same number as the original.

"A copy of each bill of lading will be forwarded on the date issued to the agent of the water carrier at the port of export in the case of direct shipment, or at the port of transshipment in the case of indirect shipments.

"The shipper is required to accept the



THE HERMITAGE HOTEL, NASHVILLE, TENN.

Building nearing completion; 10 stories high; 108x130 feet; fireproof construction; two passenger and two service elevators; direct system boiler heat; cost \$600,000; architect, J. E. R. Carpenter, New York; owner, Hermitage Hotel Co.

conditions of the bill of lading by attaching his signature or the signature of his authorized representative to the original and agent's copy."

Iron Tubing, Wire, Oil, Etc.

S. D. Demetrides, Samsoun, Black Sea, writes the MANUFACTURERS RECORD:

"There are some few American products, which I have looked up with a view to introducing in this city, which I am sure would go without trouble. They are iron wire, iron tubing, oil, arms, rubber shoes, etc., and I would be much obliged to you if you would recommend me to some suitable firms which can supply the above articles. Regarding iron tubing, I have been informed through reliable sources your country regularly exports this article to Constantinople at advantageous prices and on good terms, and for this reason I ask you particularly to recommend me to a good factory in this line."

Plans are making for the establishment of a steamship line between Lake Charles, La., and Galveston.

Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., July 25.

The past week has been an unusually quiet one in the matter of inquiries for and sales of pig-iron. One of the large furnace companies here only booked a total of 175 tons during the week, composed of small lots. Other companies did practically as "well." A stimulant is lacking in the trade and buyers appear to have lapsed into a lethargy that is hard to break; it seems to be akin to unconsciousness. At present there does not seem much hope in the matter of breaking the spell until an opening of the fall business. Lack of interest, from all appearances, has become chronic, and even sellers have become reconciled to the situation. When one asks the head of the sales department as to how business is coming on, he is almost sure to receive an answer equal to "nothing doing and nothing expected." About the best feature to the situation is that a majority of the furnace interests are strictly adhering to the \$11.50 base price.

No actual sales by Alabama furnace interests can be traced at a lower figure than above basis. However, it is not uncommon to hear of a price as low as \$11 per ton at the furnace—said to be Birmingham basis. I am not prepared to say that such a price has been named or that orders have been booked on that basis by the furnace interests of the Birmingham district. Charcoal iron is quoted at \$22 to \$22.50 per ton at the furnace.

The water-pipe market is reported fairly active. Cheyenne, Wyo., placed an order last week for about 3000 tons. Prices are unchanged and as follows per net ton f. o. b. cars at the plants here: Four-inch, \$23; 6, 8 and 10-inch, \$21; 12-inch and over, average of \$20, with \$1 a ton extra for gas pipe.

Several additional railroad coal contracts were placed the past week, and the demand for first-class steam coal continues good.

Substantial progress is being made on the erection of the Birmingham Horseshoe & Rolling Mill plant, between Birmingham and Bessemer. The engineer in charge of the work reports the foundations in and steel being erected.

Texas Crop Values.

[Special Cor. Manufacturers Record.]

San Antonio, Tex., July 23.

According to the latest data available, Texas crops, cotton and several others excepted, reached this year a total value of \$120,000,000, divided as follows: Corn, \$105,000,000; wheat, \$9,750,000; oats, \$2,000,000; onions, \$1,125,000; cabbage, potatoes and miscellaneous garden truck, \$475,000; watermelons, \$300,000. All of these crops have been disposed of. Those remaining in the field at this time are cotton, rice, forage and dry-land cereals, such as Kaffir corn, Milo maize and Egyptian wheat. It is expected that Texas will produce this year at least 3,800,000 bales of cotton, this being 100,000 bales less than was produced in 1908. Rice is showing a good stand, and will crop about 10,000,000 bushels. Data on the dry-land cereals is still absent, and the same is true of the fruit crops, although most of them have been put on the market.

The Texas & New Orleans Railroad Co., Joseph Hellen, general passenger agent, Houston, Tex., is running through East Texas a special train of stock cars containing specimens of the different breeds of registered hogs. An authority on the subject is on the train, and at each stopping point he explains the profits to be derived from hog-raising and the methods of conducting the business to the best results.

WATER-POWER OF THE SOUTH--III.

By H. A. VON SCHON, Civil and Consulting Engineer.
[Written for the Manufacturers' Record.]

In my previous articles, appearing in your issues of May 12 and June 2, I have presented the water-power resources of the South and their feasible developments in a general way, and to completely round off a discussion of the value of this great Southern resource its utilization should be the final theme. It is, therefore, proposed in this article to speak in a general way of the effect of water-power development upon the industrial growth of the South.

In our age the people of the earth are rated first and last by their industrial achievements. Some may excel in letters and arts and others in military and naval prowess, but the nation which leads the industrial phalanx is easily accorded the first rank. And this is the nowadays great national and sectional strife, to ouststrip the others in the peaceful industrial development of country, State and town, to secure the largest credit balance from the sale of products as against their purchase.

The essentials for industrial development are ample and diversified natural resources, an energetic and proportionately growing population and favorable conditions to exploit these resources by agriculture and manufacturing.

It is in this latter that power represents one of the important factors, as it influences in a more or less degree, but always, the vital result, the cost of the product. The prevailing power sources are steam and water, but the practice of applying the product as mechanical power to machinery in shop, mill and factory is rapidly giving away to their conversion into electric energy and its direct application by means of individual motor drives to the actual power work. The reasons for this change from the former practice are many fold, and have been so frequently elaborated upon in your columns that it does not seem necessary to here give to them more than brief mention. Where the steam engine or water-wheel is the final source of power this must be transmitted to the shop by some more or less complex system of mechanical power drives, as by ropes or belts to jackshafts and thence to countershafts, from which it is brought by belts to the machine. This transmission consumes some of the generated power in each of its stages to propel the transmitting device and overcome the friction in each point of shaft support and of belt or rope runs. It is a common condition that this loss from power generator to machine aggregates from 25 to 50 per cent., and the cost of the actually working power on the machine is therefore proportionately increased. On the other hand, an electric motor of suitable capacity to drive the individual machine or tool may be secured to it for its direct operation; it receives the current over copper-wire conductors from conduits beneath the floor, and may be started and stopped at will. The loss of energy from the nearby generating source to the point of application is negligible; the cost of the actual working energy is the generating cost; the mechanical drive of shafts, pulleys, ropes and belts is not needed, its first and maintenance cost is saved, and thus the cost of the applied power is further reduced. So much for the cost item, which alone should be and is of sufficient importance for any industry to decide in favor of the electric drive. But the mechanical drive practically controls the arrangement of the shop, the arrangement of the machines, which, once fixed, can be changed only at a considerable cost for alterations and delays. Therefore, mechanically-driven establishments find it most inconvenient and expensive to make timely improvements by installing larger capacity or

new machinery because it entails the rearranging of or adding to the shafting and drives. All this is avoided with the electric drives, as it requires only two copper wires to bring the energy to another machine. Therefore, the electrically-operating plant may locate without regard to power transmission requirements in any part of a suitable building or in any section of a town, while the mechanical power drive confines the location to certain floors, and that of the plant itself to a nearby fuel delivering track and economical feed-water source. And the conditions in the shop itself are most strikingly different. They are the contrast between a ceiling filled with hangers, shafts, pulleys and belts and one which is void of these. The noise of the moving shafting, pulleys and belts is not heard in the other, no oil drops from overhead drives and belts do not continually stir up and keep afloat the accumulated dust. The shop which has electric drives is clean and wholesome, a superior class of operators can be secured, and therefore the output and its quality are improved.

The advent of the electric motor drive in mills and factories means the exit of the individual power plant. When the operators realize the fact that by adopting electric drives they secure the privilege of paying only for the power which actually moves their machinery, and that by taking this energy from a central plant instead of their own, which must carry steam of the shop's full capacity at all times, they can get this power at a slight increase over its generating cost, they will not hesitate long to discard the cumbersome and costly mechanical drives. In a case of a new establishment there can be no hesitancy as to the character of the power application, provided current can be obtained from an existing central plant. In old mills the cost of the electric equipment may defer the change, though it could be readily demonstrated that this would be covered by the saving in power cost during a very few years.

At any rate, a comparison of power cost may nowadays be safely made as to its final application basis for electric energy, the difference therefore being only as to the prime source, steam or water.

The steam engine or water turbine effective unit output is the mechanical horse-power which may be converted into electric horse-power with the loss of 10 per cent. The commercial unit of electric energy is the kilowatt (1000 watts), and as one horse-power equals 746 watts, a kilowatt represents one and one-third electric horse-power, or about one and a half mechanical horse-power. The final commercial measurement of electric service is the kilowatt hour, combining quantity and time of service, and this is therefore the proper comparative unit basis of power cost. The cost of power in manufacturing establishments is, as a rule, not definitely known to the operators. In most of them no doubt the total cost of the manufacturing product is conclusively established, but the segregating of the total into the component items, especially as relating to power, is only rarely sufficiently detailed. And it is therefore not to be wondered at that the actual power cost, where generated by the plant, is greatly underestimated. The items of fuel, wages, oil and waste are probably entered on the power account, but those of maintenance, repairs, depreciation, interest on plant's cost, taxes, insurance, etc., are rarely found properly apportioned. The following are the results of several years of investigations by the Ontario

Hydro-electric Commission of first cost, fixed and operating charges of steam plants of various mill capacities which are believed to represent reliable cost estimates which, for comparison with steam-power conditions in the South, will probably err only on the side of safety.

FIRST COST OF STEAM-POWER PLANTS.						
	50	100	200	300	500	
Type of plant	SNC.	CNC.	CC.	CNC.	CC.	CNC.
Engines, boilers, piping	\$3,900	\$5,500	\$6,200	\$12,700	\$14,500	\$20,000
Installation and accessories	500	800	1,000	1,500	1,800	2,000
Cost of equipment	\$3,500	\$6,300	\$7,200	\$14,200	\$16,300	\$22,000
Foundations, setting, chimney	\$1,050	\$1,300	\$1,500	\$3,000	\$3,300	\$4,500
Boiler and engine house	600	800	800	2,000	2,000	3,000
Cost of building and placing	\$1,650	\$2,100	\$2,300	\$5,000	\$5,300	\$7,500
Cost of plant	\$5,150	\$8,400	\$9,500	\$19,200	\$21,600	\$29,500
Cost per boiler horse-power	\$103	\$84	\$95	\$64	\$72	\$59

*SNC—Simple non-condensing. CNC—Compound non-condensing.

CC—Compound condensing.

COST OF MAINTAINING STEAM-POWER PLANTS.

Annual Fixed Charges.

Boller horse-power	50	100	200	300	500	
Type of plant	SNC.	CNC.	CC.	CNC.	CC.	
Interest on first cost, 6%	\$309	\$504	\$570	\$1,152	\$1,296	\$1,770
Depreciation on equipment, 5%	175	195	360	710	815	1,100
Depreciation on buildings, 2%	33	42	45	100	106	150
Insurance, 1%	51	84	95	192	216	295
Taxes, 2%	102	168	190	384	452	590
Repair of buildings, 2%	33	42	46	100	106	150
Fixed charges—Total	\$703	\$1,035	\$1,307	\$2,638	\$2,971	\$4,055
Fixed charges per horse-power	\$14.06	\$10.35	\$13.07	\$8.77	\$9.90	\$8.01

COST OF OPERATING STEAM-POWER PLANTS.

Annual Operating Charges for 3300 Hours.

Boller horse-power	50	100	200	300	500
Type of plant	SNC.	CNC.	CC.	CNC.	CC.
Fuel in pounds	8	5.75	5.25	4.5	3.75
Fuel cost at \$2 per ton delivered	\$1,320	\$1,897	\$1,733	\$4,455	\$3,713
Oil and waste	125	200	200	475	475
Personnel, one shift					
Engineer, \$3; foreman, \$2	1 E.—0 F.	1 E.—1 F.	1 E.—2 F.	1 E.—3 F.	
Wages	\$900	\$1,500	\$2,100	\$2,700	
Repairs to equipment, 2% of cost	\$70	\$126	\$144	\$284	\$326
Operating charges—Total	\$2,405	\$3,723	\$3,577	\$7,314	\$6,614
Operating charges per horse-power	\$45.10	\$57.23	\$55.77	\$24.38	\$22.06
Remarks.—(11) Per boiler horse-power hour, with average load of 75% of capacity.					
(12) No charge for water.					

COST OF ONE STEAM HORSE-POWER PER YEAR.

Capacity in B. H. P.	50	100	200	300	500
Type of plant	SNC.	CNC.	CC.	CNC.	CC.
Fixed charges	\$14.06	\$10.35	\$13.07	\$8.77	\$9.90
Operating charges	48.10	37.23	35.77	24.38	20.83
3300 hour horse-power	62.16	47.58	48.84	33.15	31.95
6600 hour horse-power	110.26	84.81	84.61	57.53	54.00

These represent the cost of steam horse-power when the plants are maintained in good order and run with normal efficiency loads, which presuppose that they are being operated with ordinary care and that the fuel is of good quality.

If the shop or mill is operated by mechanical drives about 75 per cent. of the power plant's output will remain available for actual machine work, and the cost of power service would be 25 per cent. in excess of that of the generated power, or for compound condensing engines in dollars, for—

	100.	300.	500.
3300 hours.....	\$61.00	\$41.00	\$35.00
6600 hours.....	105.00	67.00	60.00

For larger plants the power cost will be reduced, being, approximately, for—

	1000.	1500.	2000.	2500.
3300 hours.....	\$30.00	\$26.00	\$23.00	\$20.00
6600 hours.....	52.00	45.00	39.00	34.00

This holds for \$2 fuel and modern equipment.

Not many steam-driven cotton mills get their power at these prices, though their operators generally think and claim that it costs them less, but they have only in mind the cost of fuel, wages, and perhaps interest on investment. Depreciation and maintenance charges are rarely considered, and reference to these items in the preceding cost estimates will plainly show what the influence of their omissions amounts to. For instance, for the 500-horse-power plant the proper depreciation charge is \$1410; the proper repair charge is \$600, total \$2070, being a ratio, for the 375 effective horse-power, of about \$5.50.

The power cost in a steam-driven cotton mill with a 500-horse-power plant would, therefore, be about \$35 per horse-power per year. If it is thought to be less than this it might be stated as a fact that the owners are deceived.

If this steam plant's output is converted

into electric energy the generator output would be 10 per cent. less, or 450 electrical horse-power, which equals 336 kilowatts, and if the cotton-mill machinery is driven by individual electric motors the 3300-hour year's service would be represented by 11,088,000 kilowatt hours, the unit of

hydro-electric power cost.

The cost of steam power is \$1.75 per kilowatt hour.

The cost of hydro-electric power is \$0.025 per kilowatt hour.

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amples is the Watab pulp and paper plant at Sartell, Minn. The saving in space alone gained by the absence of shafts, hangers, pillow blocks, pulleys, etc., secured important economies in the required mill buildings, while cleanliness and increased and steady speeds are credited in the experience of that plant, with an increase and betterment of the manufactured products.

After all the industries which work up the Southern staple—cotton, iron, coal and timber—are supplied with hydro-electric current, a vast surplus remains available, some for the electrification of transportation lines. The interurban electric railways in this country now exceed 30,000 miles, and some of the lines do a general steam railroad business with acknowledged success and marked savings. Of these, the Inland Empire Single-Phase Railway system of some 225 miles tracks in Washington and Idaho is admitted to rival the best steam railway system in the United States. In a recent report of an Eastern State railroad commission the cost of operating passenger trains, from the average of six important lines, is given at \$1.06 per passenger train mile, while that of six electric interurban roads in the same State is quoted at 21 cents per car mile. This speaks for itself, and points to the possibilities in the South along the line of the development of its transportation facilities and the consequential acceleration of the more complete exploitation of its natural resources.

And finally, a large amount of hydroelectric power will remain available for that extensive line of manufacturing industries which utilize electro-chemical and electro-thermo processes. These are yet in their infancy. Electric reduction of all minerals has been demonstrated to be commercially practicable, provided the electric current can be secured at sufficiently low cost, and this is true of iron ores, in which the South is especially interested. A recent investigation of an undeveloped water-power in the heart of one of the most valuable Southern iron districts, made recently by the author, indicates that some 50,000 horse-power may be developed and the current delivered to the iron furnaces at less than half a cent per kilowatt hour, earning for the enterprise a surplus of 10 per cent. This result may be obtained with sufficient flow regulation to guarantee a constant power output at all times, including the dryest year of record. With this cost for current, electric iron ore reduction is not only practicable, but economical as compared with present methods, and millions of horse-power are capable of development with like results in the South. The manufacturing of nitrogenous fertilizers by the electrical process is also of special import to the South, and may be carried on extensively by the aid of economical hydro-electric current, and of sodas, bleaching powders, calcium carbide, carbonium and many other commercially valuable products. In fact, it is true that the existing combination of Southern raw materials, climate and plentiful natural resources is not equaled in any similar section of the globe, and this is the heritage of its people to make proper use of, the results of which must be great industrial development.

For Alabama Tobacco.

Three thousand persons from Mobile and Baldwin county, Alabama, and Escambia county, Florida, attended last week the formal opening at Summerville, Ala., of the warehouse of the Alabama Sumatra & Havana Tobacco Co. The building, of concrete blocks, cost \$65,000, and its erection marks the development in Alabama of the growing of fine Sumatra leaf for wrappers.

GEORGIA'S PEACH CROP.

Advantages of the Fruit Exchange Have Been Demonstrated.

I. F. Murph, Marshallville, Ga., president of the Georgia Fruit Exchange, writes to the MANUFACTURERS RECORD:

"The peach crop of the present season in Georgia has been large in comparison with former years, and especially is this true of the southern and middle portion of the State.

"The number of cars shipped from this point in 1906 was 440; in 1907 it was 110; in 1908 it was 410; in 1909 it was 350, and in 1910 it was 657. So you will see that we have sent a very much larger amount of fruit to the markets than we have ever shipped before, and, owing to the distribution of this fruit to the different markets by the effective system of the Georgia Fruit Exchange, the prices received will average in this section 60 cents net. This is good, when the volume shipped per day and week is taken into consideration, and the general idea is that had not the exchange, in the hands of the efficient manager, Mr. I. M. Fleming, done its work so well the results of glutted markets would have been disastrous.

"The large volume of fruit taxed the capacity of the car lines and railroads to their utmost, but with the exception of about 25 cars at Fort Valley, there has been no lost fruit from lack of transportation and refrigeration. In this immediate section there has been considerable delay in transit, and this has cost the grower quite a large sum of money. Most of this delay is traceable to causes south of the Potomac yards. These delays are being investigated by the claim department of the Georgia Fruit Exchange, and, if warranted, attempts will be made to recover on these delays.

"The weather during the shipping season has been rainy and bad, but the energy of the grower in all cases has overcome the obstacles that confronted him.

"The canneries located at different places in the peach belt have done a good business, and have had a large amount of the highest-class fruit that they ever canned, and at reasonable prices, and all should make good money this season.

"Taken in all features, the crop of 1910 has not been unsatisfactory, and it has demonstrated that a very large crop properly distributed will not be sold at a loss to the grower. The Georgia Fruit Exchange wins."

Looking Southward.

J. L. Stanley of Hudson, O., who intends to settle in the South, writes to the MANUFACTURERS RECORD:

"I am at present paying attention to southern part of Virginia, hoping that something in a fruit farm or timber land can be found there. I have taken up the matter with the Chesapeake & Ohio, the Norfolk & Western and the Southern railroads. I would be pleased to learn more of the section along the line of Virginia Railway and others. Any aid you may render will be thankfully received. I intend going to Virginia in August, and if that does not prove satisfactory will try South Georgia or Florida."

T. E. Willard of the United States Geological Survey will spend six weeks in Tennessee for the purpose of tracing coal and iron-ore beds in the mountain sections of the State.

The Commercial and Industrial Association of Selma, Ala., has been merged into the newly-organized Chamber of Commerce, with J. A. Maryman, secretary.

It is estimated that the coal output of Tennessee this year will reach 7,000,000 tons.

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS' RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS' RECORD accepts no paid town write-ups. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors and homeseekers. Communications of 200 or 300 words are likely to be given prompter publicity than more extended ones.

SUFFOLK EXPANDING.

Board of Trade,
Suffolk, Va., July 24.

Editor Manufacturers Record:

The year ended July 1 has seen many improvements and a number of new buildings completed in Suffolk.

More than 80 residences have been erected at a cost of about \$260,000, and a number of additions have been made and new buildings erected in the business and manufacturing section, the total improvements for the year aggregating something like \$750,000. Extensive building continues, and a number of improvements are proposed. The demand for mechanics is far in excess of the supply.

Among the new buildings soon to be erected and in course of construction are the following: Postoffice, \$75,000; public school, \$40,000; additions to peanut-cleaner plants, \$50,000; storehouses, \$20,000. This does not include about 30 residences that are under construction and proposed, and to cost more than \$80,000. From the present outlook, building operations in Suffolk this year will greatly exceed last year's.

A number of new enterprises have locator in Suffolk in the last few years, and have all been unusually successful. Three manufacturing plans that have been in operation less than one year find it necessary to enlarge their plants in order to take care of the demand for their products.

Suffolk stands at the head of the peanut markets of the world, the value of this product alone approaching the \$4,000,000 mark.

The genial climate and generous soils of Nansemond county are especially suited to stock-raising, fruit-growing, dairying, poultry-raising and trucking, and the short winters and healthful atmosphere are thoroughly appreciated by those who have been accustomed to the long and cold winters of the North and West, with a few months in each year for the growing crop.

H. N. FITZGERALD,
Secretary.

ORANGE IMPROVEMENTS.

Commercial Club,
Orange, Tex., July 23.

Editor Manufacturers Record:

Recent improvements at Orange include: Thirty thousand square feet of new concrete walks; new reinforced concrete blocks, 125x150 feet, two stories; new power plant, large enough to furnish power for the Yellow Pine Paper Mill; new drykiln of large capacity for the Lutcher & Moore Lumber Co. The Miller-Link Lumber Co. has recently enlarged and otherwise improved its Orange Mills. The Yellow Pine Paper Mill has been closed down for the past nine months, and is just about ready to resume operations again. This industry is destined to be one of the largest in the South. The mill has been in operation for several years, and the demand for the product, together with the successful working out of the process, has caused the present enlargement of the plant to three times its former capacity.

The Webster Oil Refinery is a new concern and just beginning to find it necessary to enlarge its capacity. The Orange Iron Works has just announced that it will at

once add largely to its capacity, and the Orange Rice Mill is putting in a feed-mill department. S. R. SHEPHERD,
Secretary.

INDUSTRIAL ASHEVILLE.

Board of Trade,
Asheville, N. C., July 23.

Editor Manufacturers Record:

The beginning to make Asheville a manufacturing center has been made, and to a very satisfactory degree.

The building of a branch line by the Southern Railway along the bottoms of the French Broad River near the northern section of the city, which are never subject to overflow, opens up more than 100 exceptionally fine sites for manufacturing plants of all kinds. A fine macadam road also passes along the entire length of this property.

With two cotton mills in operation, employing several hundred hands each; the \$150,000 plant of the National Casket Co., just completed and in operation; a box factory that is running overtime to fill orders; a furniture-finishing plant of large proportions; sash, door and blind factory; two mica factories; two iron foundries and machine shops that require overtime work to keep up; a novelty woodworking plant, together with quite a number of smaller industries, all go to show that our claim that Asheville is becoming a manufacturing center is quite modest; in fact, the above enumeration shows that she has already made quite satisfactory progress in that direction.

We have in the way of cheap power a hydro-electric power plant developing 3000 horse-power, and another hydro-electric power plant in process of building that will develop 3500 horse-power, while of water-power, the French Broad and Swannanoa rivers furnish an almost unlimited supply.

The labor conditions are particularly favorable to manufacturers, there being a plentiful supply at reasonable wages, and above the ordinary intelligence.

Then, too, one of the best evidences of a city's prosperity is her paved streets, of which Asheville is justly proud. With the completion of about four miles for this year, we have right close to 30 miles of paved streets, and about 35 miles of paved sidewalks.

The good-roads movement has taken a firm hold on our people, and two large forces are constantly at work in macadamizing in different parts of the county, while one force is kept busy making repairs that are needed at various points. Neighboring counties are also pushing the good-roads movements with great enthusiasm, and there are now many hundreds of miles of fine roads throughout Western North Carolina that are a delight to the automobileists of the country.

Probably the greatest asset of our city is its water supply, pure, sparkling and cold, which comes from Mt. Mitchell, the highest mountain east of the Mississippi, the entire water-shed of more than 10,000 acres being owned by the city, with no human habitation above the intake, and constantly patrolled by wardens. The water is brought into the city by gravity pipe line of 20 miles, laid deep in the

ground, with a fall of nearly 500 feet between the intake in the mountains and Pack Square, in the center of the city.

N. BUCKNER,
Secretary.

IN TEXAS GAS FIELDS.

Chamber of Commerce,
Wichita Falls, Tex., July 22.

Editor Manufacturers Record:

We note in the issue of the *Daily Bulletin* of July 19, under the head of "Gas and Oil Developments," that Ennis is preparing to install natural-gas system, "piping gas from the Henrietta field." In making this statement you are in error, as there is no Henrietta field. The gas and oil field referred to is properly known as the Petrolia gas and oil field. This field is 17 miles from Henrietta, and the same distance from Wichita Falls. Petrolia is in its midst, and railroad connection is had only through this city. Developments in the Petrolia field within the past few months have been very rapid. There are now 400 producing oil wells, and the first gusher was brought in recently at a depth of 1720 feet, flowing 200 barrels in 30 minutes. This well is on a line between the oil and gas belt. The gas wells located here are now supplying Fort Worth, Dallas, Wichita Falls and other nearby points.

The Wichita Falls Brick & Tile Co. brought in a splendid gasser this week, the gas from which will be used to operate its plant. In the Electra oil field, 27 miles from this city, the Texas Company now has six producing oil wells, and others are being drilled. Marlow & Stone of Wichita Falls are putting down a test well two miles east of the city, and they have already found indications of oil. A good deal of prospecting is going on at present through this section, and the indications are favorable for much greater extension of the oil and gas fields.

W. C. BARRICKMAN,
Secretary.

AUSTIN BUILDING.

Business League,
Austin, Tex., July 19.

Editor Manufacturers Record:

Plans are now being worked out for a \$500,000 modern fireproof hotel. Architects and builders are now working on the plans, and it is hoped that in the next 30 days matters will be in shape to go to work.

Thirty-eight new fronts have been and are now being added to the different store buildings in Austin, some of these improvements costing as much as \$5000.

Eighteen miles of new concrete sidewalks have been laid this year, and from now on work will proceed much faster, and it is expected that nearly 50 miles will be laid during the year. The street paving on East 6th street has been completed to East avenue, and presents a very fine appearance.

The Electric Railway Co. has closed contract for an extension of its line to 39th street and the athletic field of the university. It is now laying steel, and this will be a great improvement to that section of the city, which has not had transportation facilities heretofore. The city has also granted a franchise to a company to run a street-car track across the bridge and into South Austin.

The city engineer is busy running lines and establishing corners, assisting and promoting building and also the laying of sidewalks and streets.

WILL L. Vining,
Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages

78 and 79, and under "Cities, Towns and Railroads Inviting Factories" on 112, 113 and 114.

Texas Irrigation.

[Special Cor. Manufacturers Record.]
San Antonio, Tex., July 22.

If all of the plans laid can be carried into effect the Lower Rio Grande Valley will see at least 200,000 acres of new land under cultivation by next spring. Most of this development will take place along the river immediately above Brownsville, one concern operating in Hidalgo county being responsible for 60 per cent. of the whole. With very few exceptions the irrigation plants to be established will be operated by gravity, the main canal tapping the river well up country. The Rio Grande, like most other rivers flowing through alluvial territory, has by means of sedimentary deposits elevated its own bed above the level of its valley in many places, and this is being made use of by the irrigation engineers. For some time it has been the policy of the Rio Grande Valley to dig the main and some secondary canals of irrigation system deep and broad enough to have them accommodate small barges and gasoline towboats. This has proven a great success, and now all gravity plans provide for this feature. The irrigation systems taking care of the acreage mentioned above will take annually about one-half million acre-feet of water from the river and will prove quite a drain in ordinary seasons.

Refrigeration.

At the second International Congress of Refrigeration, to be held at Vienna, Austria, October 6-11, the American delegates will endeavor to secure the next meeting for this country. A joint resolution of the Senate and House of Representatives has authorized President Taft to extend an official invitation to the congress. Leading topics to be discussed at Vienna include gases and units, construction and testing of refrigerating machinery and insulating materials, the application of refrigeration to food in the interest of agricultural producers and the ultimate consumers, ice-making, progress of refrigeration in the fermenting industries, application of refrigeration in the petroleum, canning, paint and grease industries, cooling and ventilating living, factory and assembly rooms, application of refrigeration in horticulture and silk culture and in mining, railway and steamship refrigeration, and legislation and administration.

To Make Automatic Switches.

The Shepherd Automatic Switch Co. of Montgomery, Ala., has been organized with a capital stock of \$700,000 to manufacture railway switches opened or locked from locomotive or electric railway car. This is done by equipping cars with a drag pin fitting a groove that strikes a slot between the rails, throwing the switch before the wheels reach it. M. L. Shepherd is president; Nathan Lohman, vice-president; G. E. Kyser, secretary; T. E. Lovejoy, treasurer. The company plans erecting works at Montgomery, and later in other cities.

The Waccamaw Transportation Co. of Georgetown, S. C., recently incorporated, is for a steamboat line between the Waccamaw River from Georgetown to Reedsville, S. C. It will carry passengers and freight, besides serving as a mail route. The directors are A. A. Springs, president and general manager; St. J. M. Lachicotte, vice-president; J. I. Hazard, secretary and treasurer; Jos. Schenk and H. B. Springs.

Boston interests have been investigating the opportunities for the establishment of a steamship line between that city and some Texas port at a cost of \$1,500,000.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Colorado, Tex.—City voted \$30,000 of bonds for road improvements.

Greenville, Ala.—Butler county voted bond issue for roads; first issue, \$155,000.

Harlingen, Tex.—City voted \$30,000 of bonds for street and water-works improvements.

Jacksonville, Fla.—City voted \$100,000 of bonds for street paving.

Oakville, Tex.—Live Oak county, Precinct 1, voted \$25,000 of bonds for road improvements.

Roxboro, N. C.—City voted \$20,000 of bonds for street, sidewalk and water-works improvements.

Bonds to Be Voted.

Dickson, Tenn.—Dickson county votes August 4 on issuing \$100,000 of bonds for road improvements.

Elberton, Ga.—City votes August 17 on issuing \$25,000 for roads.

Griffin, Ga.—Spalding county votes August 23 on issuing \$50,000 of bonds for roads and bridges.

Contracts Awarded.

Atlanta, Ga.—City awarded contract for bitumen and macadam paving to cost \$15,000.

Baltimore, Md.—City awarded contract at \$22,887 for laying sheet asphalt on Fayette street.

Columbus, Ga.—City awarded contract for 11,000 yards of brick paving.

Dallas, Tex.—City awarded contract for bitulithic paving on Commerce street.

Dallas, Tex.—City awarded contract at about \$68,000 for creosoted block paving and at \$4506 for bitulithic paving.

Havre-de-Grace, Md.—State Roads Commission awarded contract for constructing macadamized road to Aberdeen; \$8000 per mile.

Kansas City, Mo.—City awarded contract for various street improvements.

Lake City, Fla.—City awarded contract for construction of pavement and cement sidewalks; expenditure, \$25,000.

Lexington, Ky.—Board of Public Works awarded contract for construction of concrete sidewalks on Water street.

Louisville, Ky.—Board of Public Works awarded contract for asphalt paving on several streets.

Shawnee, Okla.—City awarded contract for 52,000 yards of asphalt paving.

St. Louis, Mo.—Board of Public Improvements awarded contract for various street improvements to cost \$373,000; about six and a half miles of construction.

St. Petersburg, Fla.—City awarded contract for construction of sidewalks and for curbing, grading and bricklaying.

Pine Bluff, Ark.—City awarded contract at \$20,000 for construction of concrete sidewalks.

Contracts to Be Awarded.

Dallas, Tex.—Dallas county opened bids July 29 for constructing Edgefield Avenue road.

Dallas, Tex.—City will soon invite bids for paving on Pearl, Camp and Griffin streets.

Dallas, Tex.—Dallas county opens bids July 29 for graveling Garland and Houston roads.

De Queen, Ark.—City will construct four miles of concrete sidewalk.

Dothan, Ala.—City opens bids August 8 for constructing about 12 miles of sidewalks and curbing and guttering.

El Reno, Okla.—City receives bids until August 3 for Rock Island avenue street improvements.

Fairfield, Tex.—Freestone county receives bids until August 15 for constructing a system of county roads for road district No. 1.

Greensboro, N. C.—City will pave Buchanan and Davie streets with asphalt, bitulithic or vitrified brick; about 12,000 square yards.

Houston, Tex.—Harris county receives bids until August 9 for paving West Montgomery road with gravel or shell.

Louisville, Ky.—Board of Public Works opens bids August 2 for various street improvements.

Montgomery, Ala.—City Treasurer receives bids until August 1 for paving about 1115 square yards of South Highland court and for paving sidewalks of same.

Norfolk, Va.—City Engineer will prepare estimates for the cost of paving Church street from Main street to city limits.

Norfolk, Va.—City invites bids for brick paving on Pulaski and Charles streets, and for grading and belgian-block paving on Elizabeth street.

Perry, Fla.—City receives bids until August 25 for paving from three to five miles of street.

Rider, Md.—John M. Dennis receives bids until August 3 for grading, draining and bridging Dennis avenue; distance about 6000 feet.

Texarkana, Ark.—City will pave Pine street with gravel, concrete curb and guttering; estimated \$35,000.

Towson, Md.—Highway Commission of Baltimore county receives bids until August 4 for improving Lawrence avenue a distance of 1500 feet.

Tulsa, Okla.—City will soon advertise for bids for paving to the amount of \$160,000.

Wheeling, W. Va.—Board of Control opened bids July 26 for grading Belmont street.

NORTH CAROLINA HIGHWAYS.

The Movement for Improved Roads Spreading.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., July 25.

The good-roads movement in this State is spreading so rapidly as to be one of the most encouraging signs of the times. Mecklenburg, the first county in the State to build permanent highways, still leads in mileage, Guilford coming second and Durham third. The members of the Legislature, county commissioners and road supervisor of Wake county made a notable automobile trip over the roads of Durham a few days since, under the auspices of the Raleigh Chamber of Commerce, for the express purpose of getting information as to the best method of both road and bridge building. All were the guests of William A. Simpkins of this city. Wake is a very large county, and has a very small mileage of first-class roads. Durham began permanent construction in 1896, and now has 107 miles of admirable road, all metaled with trap-rock, which is very abundant in most parts of that county. This stone, regarded as the best for roads, is found in many parts of Wake, some of the dikes being miles in length.

All of the roads in Durham have been

FEATURES OF IMPROVED HIGHWAYS NEAR DURHAM, N. C.



built by convict labor, which is in general use in most of the counties in the State, except 12 miles, which were built by contract, the grading being sometimes quite heavy, and seven bridges being included in the contract. Reinforced concrete has been chosen as the standard material for the bridges. Durham has no large streams, and hence long bridges are not necessary. The longest of the new type will be across Neuse River, and will probably have three arches. That county finds convict labor costs 50 cents a day, this including guarding, clothing, food and teams. The contract work is declared to be perhaps superior to that done by the convicts. All the new roads in Durham have been laid out by the noted expert, Gilbert White, who is doing such valuable work in several counties in North Carolina, including Granville, which joins Durham. The cost of roads in the latter county seems to have been on an average about \$4500 a mile. Stone is bought from the farmers and is bought at the crushers at 50 cents a ton. The average amount used on a mile is 2000 tons. The amount spent last year on roads was \$125,000. It is found that the good roads have almost exactly trebled the value of rural property, and have also had a marked effect in increasing value of town property. In only two cases have farmers along a line of road demanded damages for right of way, but in both cases the jurors decided against the claimants. The road fund, raised by a tax of 16 cents on the \$100 valuation, brings in this year about \$40,000, but bonds are issued for a good deal of the construction. In the case of the contract-built roads the money was borrowed, and later bonds were issued. The county has road machinery of the latest type, worth \$35,000. The roads are 26 feet wide, the grading is admirably done, and the bridges stand a test of ten times the weight which would ordinarily be put upon them. The bridges of this type give entire satisfaction. They cost more than steel bridges, say 30 per cent. more, but are far more permanent, and have not been affected by high water. A steel bridge was carried away two years ago by a flood and was so twisted that though it was recovered and taken to pieces, it will be resold to the makers, who will have to refit it. The general belief seems to be that reinforced concrete bridges will last forever. The longest one yet built, shown in the photograph, cost \$7500. The Durham authorities expect to double the mileage of metaled roads in the next three years. The roads are being extended to the borders of the county, for the very obvious purpose of drawing trade from adjoining counties. A 20-mile road, built at a cost of \$88,300, to the border of Person county, a famous tobacco section, brings a very great trade from the latter



county, which has very poor roads. In bad weather Person farmers use four horses to haul a load of leaf tobacco to the Durham line, and from that point use only two horses in hauling it to the town of Durham, which is a notable tobacco market, known all over the world.

The appreciation of the good roads of Durham is most enthusiastic by town and country folk alike, and the entire business community participates in the effort to make the roads the very best, and there is satisfaction at the results so far achieved. All agree that the only possible way to build roads is by means of a bond issue. The Wake county delegation which visited and inspected the roads reached the immediate conclusion that bonds are the only means of securing roads. This will very probably lead to an important movement in Wake this year, as counties on three sides of it—Durham, Granville and Johnston—are going in for road-building. Johnston is to have sand-clay roads, which are so admirable in the vicinity of Columbia, S. C.

There are to be two great automobile highways to North Carolina, one the Southern, the other the Capital, and arrangements are being made to link the two; that is, to link Winston-Salem and Raleigh and the various points along the lines of a triangle taking in Greensboro, Durham, Raleigh and Pinehurst, and to see that the roads are made perfect. The movement is general for wider roads, as in some sections they are too narrow.

It is said by building contractors and architects that Charlotte is now leading the State in the number of new buildings in construction, with Winston-Salem second, at the latter many constructions be-

ing very large, Raleigh coming third and Wilmington fourth in this respect. Many industrial plants are being erected at Charlotte and Winston-Salem. There are very few places in the State which are not making substantial growth. This is in spite of poor crops and in a general condition of business in the whole country not first-class.

At Durham the finishing touches are being put on the new million-dollar cotton mill, known as the Erwin No. 4. Mr. W. E. Erwin, the head of these mills, told the Durham people he would locate the mill there if a particular highway was constructed in first-class style. This work has been done and the road named in his honor. In Durham county another cotton mill gave notice to the authorities that if a fine road was built to it the stock of the mill would be doubled. This week the mill directors increased the stock from \$150,000 to \$300,000. This shows the appreciation the mills have of good roads.

F. A. OLDS.

One County's \$250,000.

W. S. Keller, engineer department of roads, Dallas county, Selma, Ala., writes to the MANUFACTURERS RECORD:

"Good-roads bonds to the amount of \$250,000 will be issued and sold this fall for the purpose of building substantial highways throughout this county. The survey and estimation of earth and gravel quantities for seven miles of road have been completed, and advertisements for bids for the construction will be given out in a few days. Practically all of the work will be done by contract, and it is the expectation of the engineer to have at least 50 miles let by January 1, 1911. Surfac-

ing material to be used is gravel. Contractors will be required to grade and gravel the roads and do all other work pertaining thereto except the construction of concrete culverts and bridges. Mr. Keller is in charge of the work."

New Orleans-San Antonio.

Commercial Club,

Orange, Tex., July 23.

Editor Manufacturers Record:

Through the efforts of a special committee from the Commercial Club, Orange will soon have a public highway directly eastward into Louisiana. Five thousand dollars has been subscribed by Orange citizens to pay one-half the cost. The other half is to be paid by the citizens of Calcasieu parish, Louisiana. This road is intended to form a part of the proposed automobile road from New Orleans to San Antonio. If the other parishes and counties will do as well as Calcasieu and Orange, the highway will soon be built. We count on this road into Louisiana as one of the best moves that Orange has made in the way of public improvement for many years.

Notes.

Two counties alone in Florida contemplate spending \$1,000,000 each for good roads.

Judge H. D. Lampley of Greenville, Ala., in discussing plans for road construction in Butler county under a bond issue of \$155,000, informs the MANUFACTURERS RECORD that there will be needed an engineer skilled as a road builder, especially in sand and clay work.

At the election on August 23 in Spalding county, Georgia, the question of an issue of \$50,000 of bonds for roads and bridges will be voted on.

The Dallas-Oak Cliff Viaduct.

The MANUFACTURERS RECORD has received from Ira G. Hedrick, the well-known consulting engineer, of Kansas City, Mo., a statement regarding the Dallas-Oak Cliff viaduct. Mr. Hedrick writes:

"The plans and specifications for the viaduct are completed, but on account of the delay in securing the necessary right of way the date for receiving bids is still indefinite. The plans and specifications and the supervision of the construction of the work will be in my charge, as consulting engineer for the county of Dallas. The structure will be of reinforced concrete arch type. The total length of the concrete structure will be about 5100 feet. The clear roadway provided will be 40 feet in width, with two sidewalks in addition, each five feet in width. The total yardage of concrete in the structure will be approximately 43,000. The funds available for the construction of the structure are approximately \$600,000."

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LICKING RIVER ROAD SOLD.

Coal and Oil Development Along Its Line in Kentucky and More to Be Done.

J. A. McLeay, 517 Fourth National Bank Building, Atlanta, Ga., and associates have purchased the Licking River Railroad, 32 miles long, from Salt Lick, on the Chesapeake & Ohio Railway, via Yale to Blackwater, all in Kentucky. There are two branch lines, totaling 20 miles. The purchasers are now engaged in lowering grades and putting in standard ties preparatory to converting the line from narrow to standard gauge. Then the company will sell five narrow-gauge locomotives and 75 cars, and will purchase a similar number of standard-gauge locomotives and cars, besides a steam shovel. Dr. McLeay is the purchasing agent, and he says that no engineers or other assistants are required at present.

With reference to the territory through which the line runs, he adds that there are splendid opportunities to develop marble, sandstone, fire-clay, sand for glass and first-class coal and oil fields. Materials for manufacture and fuel for producing power are found side by side.

It is proposed to extend the road 8 or 10 miles to reach undeveloped coal fields in Morgan county, Kentucky, which are said to contain some of the finest coal in this country. The oil development on the route is extensive. The Standard Oil Co. is interested, and proposes to drill more wells. It is contemplated to use oil-burning locomotives in the future.

New Railroads Planned.

Among the new railroad enterprises recently organized or chartered are the following:

Birmingham, Selma & Pensacola Railroad Co., to build a line from Centerville to Selma, Ala., 45 miles; also 15 miles from Blocton to Centerville. The complete route proposed is from Birmingham to Bessemer, Blocton, Centerville and Selma; also continuing to Pensacola, Fla., with a branch to Marion, Ala. The directors and incorporators are: President, J. C. Suttle of Vick, Ala.; treasurer and general manager, A. J. Weaver of Brent, Ala.; secretary, H. E. Reynolds of Centerville, Ala., the other incorporator being J. T. Ellison, also of Centerville.

Laurel Fork & Mendota Railroad Co. of Abingdon, Va., chartered to build a line 45 miles long from Mendota to Laurel Fork; capital from \$1000 to \$5000. Incorporators are W. B. Robertson, president; Alexander Stuart, secretary and treasurer, both of Abingdon; C. E. Bolling and E. G. Leigh, Jr., of Richmond; C. D. Langhorne of Mirador, J. Thompson Brown, Brierfield, and John C. Dabney of Lynchburg.

Oklahoma Red River Railroad Co. (change from the Red River Railroad Co.) chartered in Oklahoma with \$5,000,000 capital. It proposes to build a line from Oklahoma City to Houston, Tex., crossing the Red River near Grady and running thence via Gainesville, Fort Worth, Dallas and the Trinity River Valley. Joseph O. Moore of Kansas City, Mo., is president, succeeding J. W. Hocker of Purcell, Okla., who remains as a director. The other members of the board are F. J. Hawk and S. C. Hawk of Oklahoma City.

Chattanooga Southern Sale.

The Chattanooga Southern Railroad, according to a dispatch from New York, has been ordered to be sold by the receiver on

August 1 to satisfy claims amounting to more than \$2,000,000. The line is 90½ miles long from Chattanooga, Tenn., to Gadsden, Ala. Newman Erb, Henry W. De Forest and others of New York are expected to be the purchasers.

New Equipment, Etc.

The Baltimore & Ohio Railroad Co. has ordered 1000 low-side steel gondola cars from the Pressed Steel Car Co. of Pittsburgh, Pa. The recent locomotive order given to the Baldwin Works, Philadelphia, Pa., is for 50 Mikado type engines, which have a two-wheel truck forward, with four pairs of driving wheels and one pair of trailing wheels.

The Georgia Southern & Florida Railway will, according to a press report, receive its 15 new locomotives ordered from Baldwin's on September 1.

A report from Greensboro, N. C., says that 300,000 railroad ties have been ordered by J. B. and B. N. Duke for the proposed electric railway to connect Charlotte, Anderson, Greenville and Spartanburg.

The Gulf, Colorado & Santa Fe Railway, according to a dispatch from Texas, is receiving 8000 railroad ties from Mexico, various kinds of wood composing the lot, the object being to test the different materials for the purpose of selecting the best.

The Baltimore & Ohio, says a market report, has ordered 500 tons of rails from the Illinois Steel Co., Chicago, and 1000 tons from the Carnegie Steel Co., Pittsburgh.

The Southern Pacific, according to a report quoting an official, will have 1800 of its new freight cars in service by September.

Frank Janes, Oak Grove, La., says an official, will want two locomotives, six flat cars, four box cars and two passenger cars for his timber railroad, which is now being built.

The Louisville & Nashville Railroad, according to a market report, has divided an order for 550 tons of bridge steel between the Louisville (Ky.) Bridge & Iron Co. and the Virginia Bridge Co. of Roanoke, Va.

The Pennsylvania Railroad is reported to have ordered about 700 tons of bridge steel from independent manufacturers.

Some Interesting Rumors.

The New Orleans Great Northern Railroad and the Frisco system, according to a rumor from Covington, La., contemplate the construction of a bridge across Lake Pontchartrain, and thence to New Orleans. Connection would be made with the track of the New Orleans Terminal Co. The bridge would be about 11½ miles long, but it would afford a short and direct route from Mandeville, Covington and other Louisiana points. The New Orleans Great Northern now enters New Orleans under a traffic arrangement with the New Orleans Northeastern, or Queen & Crescent Route, while the advantage to be gained by the Frisco would be in the way of an additional entrance. The report, it appears, is in line with recent rumors that the New Orleans, Mobile & Chicago Railway, formerly the Mobile, Jackson & Kansas City road, would unite with the other two lines and build a new line from Hattiesburg, Miss., to New Orleans, and would also construct the long-contemplated extension from Middleton, Tenn., northward to the Ohio River or else to Memphis, Tenn.

Two Kingwood Tunnels.

The improvements which the Baltimore & Ohio Railroad Co. will make at the Kingwood tunnel in West Virginia will include not only the ventilation and lighting of the present tunnel, but the construction of an entirely new tunnel with

two tracks about 80 feet to the north and 30 feet lower than the present tunnel. The new tunnel is to be used for freight trains, and the grade through it is easier than the old route, which is to be thereafter devoted to passenger trains. A ventilating fan is being placed in the old tunnel, which will be lighted by electricity. To the new tunnel a new right of way had to be obtained through the town of Tunnelton, and this will require the removal of several buildings. On the western side of the mountain the helping engines now run through the Kingwood tunnel in handling freight trains, but when the new tunnel is in use they will, by reason of the lighter grade, be able to cut off from trains at the western end of the tunnel, which will reduce the amount of smoke in the bore. The old Kingwood tunnel is single-tracked, and is seven-eighths of a mile long, and the new one will be of about the same length.

A Louisiana Timber Railroad.

S. Taylor Jackson, chief engineer, Pioneer, La., writes that construction is proceeding rapidly on Frank Janes Timber Railroad from Terry to Janesville, La., six miles. J. C. Ahles, Oak Grove, La., is the contractor. The line will include one bridge 300 feet long over Tiger Bayou and another 120 feet long over Pine Bayou. The route is comparatively level. Eventually the road will connect with Phin Kimball's lumber road at Laark, on the west, and at Hamley's, on the east. These extensions will require a steel bridge 150 yards long over Boeuf River and another 175 yards long over Bayou Macon. Rails are already bought for the first six miles, and will be laid ready for operation by September 15. Two locomotives, six flat cars, four box cars and two passenger cars will be wanted. Frank Janes is president; John Janes, vice-president; Mrs. Frank Janes, secretary and treasurer, and George Wesley Smith, general manager.

Track to Joplin Union Station.

The Missouri, Kansas & Texas Railway has received bids for the construction of three and one-third miles of line at Joplin, Mo., in order to reach the new union depot. The route lies through rough country, and includes three pile trestles and some concrete culverts. Contract is not yet awarded. The work is under the direction of S. B. Fisher, chief engineer, 407 Wainwright Building, St. Louis, Mo.

Besides the Missouri, Kansas & Texas, three other roads will use the union station, namely, the Santa Fe, the Kansas City Southern and the Missouri & North Arkansas.

Will Complete to Harlan This Fall.

A dispatch from Harlan, Ky., says that the Wasioto & Black Mountain Railway, which is under construction from Wasioto, on the Louisville & Nashville Railroad, to Harlan, and thence along Poor Fork, will be completed as far as Harlan by November 1. This announcement is credited to G. W. Callahan, president of the Callahan Construction Co. of Knoxville, Tenn., which has the general contract. There are 23 firms having subcontracts for grading, and about 2000 men are employed.

Tampa & Jacksonville.

A press dispatch from Gainesville, Fla., quotes A. De Sola Mendes, vice-president of the Tampa & Jacksonville Railroad, as saying that the contemplated extension remains indefinite, but the chief engineer is now preparing plans, although it is not determined whether the extension will be to Ocala or Dunnellon, Fla. The company has made considerable improvement of the present line, standard 60-pound rails having been laid in place of the old light rail. Many new ties were also put in the track,

bridges were repaired and new motive power has been bought.

The Tampa & Jacksonville is the successor of the Gainesville & Gulf Railroad Co., and the line extends from Sampson City via Gainesville to Fairfield, Fla., 48 miles.

Wheeling to Pittsburg.

A press report from Wheeling says that the Pittsburg, Steubenville & Wheeling Railway is a proposed interurban electric line for which a charter has been obtained in Pennsylvania, and charters will also be requested in Ohio and West Virginia. It is expected to operate over the electric railway between Wheeling and Steubenville, O., and thence over the new road to Pittsburg, possibly using the Pittsburg Railway Co.'s line from Mt. Lebanon to Pittsburg. The incorporators include W. E. Hildebrand, Oliver Building, Pittsburgh; A. H. Kerr and J. Winfield Reed of Burgettstown, Pa.; D. G. Banford of Midway, Pa.; C. W. Behney and A. Wagner of Cecil, Pa.; John N. Henry and H. J. Wilcox of Bridgeville, Pa.; D. J. Sinclair of Steubenville, O., president of the Steubenville & Wheeling line.

Site for Larger Terminals.

The Western Maryland Railway Co. has purchased 10 acres of land in the southern part of Baltimore city, near its Port Covington terminal. The tract abuts on five streets, and it is immediately south of the Baltimore & Ohio Railroad line to Locust Point. It is the purpose of the Western Maryland to build terminal tracks on the property and also additional terminals. The company recently purchased a water-front site adjoining Port Covington, and a new pier is to be erected there. It is also expected that a grain elevator will be built. These improvements will be in connection with the joining of the Western Maryland with the New York Central system by the completion of the new line between Cumberland, Md., and Connellsburg, Pa., upon which construction is well advanced.

Railroad Notes.

H. B. Chamberlain, according to a dispatch from Nashville, Tenn., has been elected vice-president in charge of traffic on the Tennessee Central Railroad. He was formerly on the Erie system.

The Bryan & College Interurban Railway Co., according to a dispatch from Bryan, Tex., has decided to issue \$100,000 of 6 per cent. bonds for additional equipment and extensions, besides extinguishing the floating debt.

A dispatch from Ardmore, Okla., says that Patterson & Moore of Enid, Okla., and Cravens & Mort of Milton, Iowa, have submitted to C. L. Byrne, receiver, a proposition to purchase the Ardmore street-car system.

The court of Sevier county, Tennessee, has directed that the county subscription of \$150,000 of 5 per cent. bonds for the construction of the Knoxville, Sevierville & Eastern Railway be paid to W. J. Oliver of Knoxville, who built the line.

The Memphis (Tenn.) Street Railway has begun the use of pay-as-you-enter cars upon one of its divisions. It is expected that the new style cars will also be operated on the other routes as soon as the necessary changes in the equipment are made. A dispatch from Waco, Tex., says that pay-as-you-enter cars are being tested there.

It is reported from Augusta, Ga., that rights of way have been granted for a motor car railway between Augusta and Greenville, S. C. Gasoline-electric cars will be used, and the route will be via Laurens, Newberry, Greenwood, Edgefield and

Balvedere, S. C. It is rumored that Northern capitalists are backing the enterprise, but no names are mentioned.

A dispatch from Durham, N. C., says that the Burgrahaw Company, which was building an electric railway to connect Burlington, Graham and Haw River, N. C., has been thrown into a receivership, and C. A. Scott was appointed receiver. About \$100,000 is said to be involved in relation to subcontracts. About three-fourths of the work is completed.

The Baltimore & Ohio Railroad, it is reported from West Virginia, contemplates building an extension of its Ohio River line to reach coal fields in Kentucky, and also possibly in Buchanan county, Virginia. Some mysterious surveys have been made, and it is rumored that the company is back of them. Construction of such a road would probably include connections with the Carolina, Clinchfield & Ohio Railway, which is building northward through Virginia to reach Elkhorn City, Ky.

A dispatch from Fredericksburg, Va., says that Channing M. Ward of Chicago has made a proposition to build a railroad in the Northern neck, beginning at a point on the Chesapeake & Ohio Railway between Hanover Courthouse and Doswell, running thence to the Rappahannock River at or near Tappahannock. A ferry is to be used across the stream, and the railroad is to be continued on the other side to some point on the Great Wicomico River or the Chesapeake Bay.

Henry K. McHarg, formerly president of the Texas Central Railroad, which was recently purchased by R. H. Baker of Houston, Tex., has, according to a report from Waco, Tex., made a farewell gift to all employees of the road in its service for more than three years. This represents a year's salary to all the officials and a month's salary to all engineers, firemen, conductors, brakemen, clerks, agents and other employees. It is said that the gift amounts to more than \$45,000.

PHOSPHATE

Humus for Fertilizer.

The MANUFACTURERS RECORD has authentic information regarding the plans of the Florida By-Products Co. for the production of humus for fertilizers. Its plant will be located in Marion county, Florida, the buildings to be of fireproof construction, and, with the equipment, to cost about \$60,000. The company desires to purchase engines, boilers, driers, dredge-boat, etc., and proposals will be received by W. F. Brabrook, 110 Temple Court Building, Atlanta, Ga. Officers of the company are John D. Dickson, president; R. E. Waggaman, vice-president and manager; W. F. Brabrook, secretary, and S. E. Smith, treasurer. The capacity of the plant will be 50 tons per day.

Big Plant Under Construction.

It is announced that the first of the buildings to be erected for the proposed plant of the Germofert Manufacturing Co. of Charleston, S. C., has been completed. This is the dry-mixing plant, and will have a capacity of 30,000 tons. Other structures to be erected include an office building, acid chamber, mill building, burner-rooms, power-house and stockhouse. They will all be of wood construction except the power-house and burner-rooms, which will be of brick. With the exception of the mill building, which will be two stories high, all other structures will be one story. Frank L. Lanier of Charleston is the contractor.

To Erect Fertilizer Factory.

Formal organization of the Pamlico Chemical Co. of Washington, N. C., has

been effected for the purpose of establishing and operating a large fertilizer plant near Washington. The company is capitalized at \$100,000, and it is stated that contracts have already been awarded for the construction of its plant. The main building will be 135x208 feet, while the storage-house will be 40x100 feet. An office building will be erected, and the company is also constructing a pier about 200 feet long in Pamlico River. In addition to water transportation, shipping facilities will also be afforded by rail, as the Norfolk & Southern Railway Co. has constructed a spur from its line to the factory site. Officers of the company are J. F. Cowell, president; R. R. Fleming, first vice-president; George T. Leach, second vice-president; Richard Bragaw, secretary, and A. M. Dumay, treasurer.

Central Kentucky Phosphate Co.

Articles of incorporation have been filed at Lexington, Ky., for the Central Kentucky Phosphate Co., with a capital stock of \$100,000. It is stated that the company will develop mineral deposits in the vicinity of Versailles, Woodford county. Its incorporators are E. C. Bowman of Winston-Salem, N. C.; W. B. Alexander and L. H. Baker of Birmingham, Ala., and A. B. Rumley of Kankakee, Ill.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Rebuilding Its Sawmill.

It is announced that work will begin within few days on rebuilding and enlarging the sawmill plant of the Crowell & Spencer Lumber Co. at Long Leaf, La. The improvements will consist of an extension of 36 feet to sawmill; installing a band mill in addition to a circular mill, which will nearly double the capacity of the plant; replacing much of the present machinery with larger and more modern equipment; erecting steel power-house, with fuelhouse of brick; excavations for pond and to install facilities for transferring logs from one pond to another of different levels; new planing-mill building, in which all woodwork will be replaced and new machinery installed; new engine, power plant, blower system, etc. Thrall & Shea, contractors, of Lake Charles, La., have the contract for the improvements, which will involve an expenditure of about \$50,000.

Acquires 9000 Acres.

A dispatch from Monroe, Miss., states that Samuel Mouton, who has extensive lumbering and milling interests at McCall, Miss., has recently acquired 9000 acres of timber land in the same vicinity for \$125,000. It is stated that the purchaser will erect a sawmill of 50,000 feet daily capacity to operate in connection with a similar mill already in operation at McCall.

Indiana Lumber & Cooperage Co.

The Indiana Lumber & Cooperage Co. of Camden, Ark., has incorporated with a capital stock of \$250,000 for the purpose of establishing and operating a lumber mill at Camden. Officers of the company are Charles J. Smith, president; William O'Rourke, first vice-president; G. A. Hogan, second vice-president, and A. Danville, secretary and treasurer.

Installs New Band Mill.

The Little River Lumber Co., under the management of C. B. Russell, has installed a new six-foot band-saw mill in place of a circular mill formerly operated at its plant at Linden, N. C., and is now operating full time. This mill has a daily ca-

pacity of 25,000 feet, and is equipped with drykilns and planer for dressing box and roofer stock. The company recently added a new kiln and additional power, and states that it is now fully equipped to handle its increased production of original growth North Carolina pine boards, which it manufactures exclusively.

Wants 1000 White Pine Trees.

The B. T. Company, Branchville, Va., states that it desires to purchase 1000 white pine old growth trees. They should measure from 30 to 40 inches on the stump and carry from 30 to 50 feet of clear body.

Lumber Notes.

It is announced that the Duke interests have purchased 300,000 crossties for the Greenville, Spartanburg & Anderson Railway.

The Otis Manufacturing Co. of New Orleans is reported to have purchased 3,000,000 feet of mahogany lumber in British Honduras, and that the first consignment will be shipped to New Orleans about August 1.

The Spice Run Lumber Co. of Charleston, W. Va., has incorporated with a capital stock of \$100,000 and will install a sawmill and develop a tract of timber land in Greenbrier county. Its incorporators are James Flynn, J. F. Clark, C. W. Morton and associates.

Cement in the Southwest.

A. L. Beck, president Oklahoma Portland Cement Co., Ada, Okla., writing to the MANUFACTURERS RECORD that cement market conditions in Oklahoma, Texas, Arkansas and New Mexico territories are above standard, adds:

"The wheat and oats in this territory have been marketed to a great extent, and are of an excellent quality. The corn is practically matured, and is a bumper crop. The acreage of corn is very large, and will yield an immense amount of feed. The hay crop is fine, and the cotton crop never was better than it is this year. The acreage is very large, and the cotton will be of an excellent quality. A great deal of this territory will commence to market cotton within the next 30 days, and will continue for three or four months."

"Our shipments for this year have been very good. We have not been rushed with orders, and have been able to ship to our customers within 48 hours after receiving the order. At the same time we have been operating our plant to its full capacity since January, and are operating same to its full capacity at the present time. I am looking for a rush after August 15, and would not be surprised if the price of cement would advance 10 to 20 cents per barrel in this section."

"A great many substantial improvements are being made in Oklahoma and Texas, such as reinforced concrete office buildings and business houses, asphalt and concrete streets, and there has been hundreds of miles of concrete sidewalks laid in the towns and cities of Oklahoma and Texas in the past year; in fact, the spirit of improvement is very strong in this territory. Small towns of 3000 or 4000 inhabitants are putting in fine concrete curbing and asphalt streets with concrete bases. The country is having a remarkable growth, and I am looking forward to a great many years' prosperity in this territory, as there is a world of untilled land that cannot be excelled that will be taken up by energetic young men from the East."

"There are thousands of acres of land in this section that will produce in dollars and cents out of their crops this year more money than the land can be bought for at the present time. This condition cannot remain very long."

MINING

LOUISIANA OIL AND GAS.

Indications in Eastern and Northeastern Sections.

Members of the United States Geological Survey have recently visited several localities in Louisiana to investigate the reported occurrence of petroleum and natural gas east and northeast of the known productive fields.

During the last five years natural gas has been noticed in water wells drilled near Bogalusa, and more than a year ago gas bubbles that left iridescent films of oil on the surface of the water were observed in Bogalusa River. Samples of this gas collected in glass jars smelled like the crude petroleum of Southern Louisiana. These samples and others mentioned below were analyzed by the United States Bureau of Mines.

The Bogalusa sample contained no higher hydro-carbons than methane, and no hydrogen sulphide, olefines or carbon monoxide.

The nitrogen content of this gas is so great as to lead to the belief that much of it is produced by the decomposition of vegetable matter under water near the surface of the ground, but the presence of oil indicates also that part of the material came from considerable depth.

A post hole dug on the bank of the Mississippi near Bayou Sara emitted a strong odor of oil, and when this hole was deepened below the level of the present Mississippi River silt the odor became much stronger and gas, which could be burned, bubbled up continuously. Chemical analysis of material collected here showed it to be crude oil, and the depth from which it comes, together with the occurrence of natural gas, show that it is a definite seepage of oil similar to that noticed a few miles to the southeast, at Deerford, where, however, a well sunk more than 2500 feet gave no further indications of oil or gas.

About three miles southwest of the town of White Castle a well drilled for water several years ago to a depth of 187 feet showed considerable natural gas. In fact, the gas blew the tubing out of the ground. A well driven to a depth of 50 feet alongside of the first one gave a flow of natural gas sufficient for lighting three or four houses, and a pipe line is now being laid for that purpose. On test the oil shows no trace of sulphur, and has no odor of petroleum. An analysis of the gas shows an excess of carbon dioxide, but not the usual high percentage of nitrogen characteristic of gas resulting from the decomposition of vegetable matter buried in the Mississippi silt.

Judge Z. T. Earle, Sr., reports that about eight years ago an old water well 30 feet deep, three miles southwest of White Castle, showed gas bubbles which also yielded films of oil. In the last eight years three test wells have been drilled in this neighborhood. The first, drilled 294 feet, made a good showing of natural gas; the second, drilled 542 feet, showed gas and traces of oil at 290 feet; the third struck a log at a shallow depth and was abandoned.

During 1909 another well was drilled to a depth of more than 2300 feet. Traces of oil were encountered at 700 feet, but no considerable amount of gas below 300 feet. At 2300 feet salt water was struck and the well was abandoned. During the same year a well was sunk 1300 feet at the sugar-house in White Castle, but gave no significant indications of either oil or gas. A careful examination of the logs of all wells drilled for gas, oil or water in this region in recent years will be necessary to determine the probability of obtaining a

supply of gas sufficient for practical uses.

Nearly all the water wells drilled near Grosse Tete to a depth of more than 80 feet show natural gas, which in several wells has had sufficient pressure to blow the tubings out of the ground. During the examination made by the survey one of these wells, drilled a year ago, was cleaned of its accumulated mud by flushing and immediately produced gas of sufficient pressure to throw water about 20 feet from the top of the well casing.

The lack of odor of oil and the large percentage of nitrogen indicate that this is surface gas, but further examination here is desirable.

A year ago a well was drilled at the edge of the city of Monroe for a water supply. It tapped natural gas at 1400 feet. At a point slightly below this the drill went into salt water, yielding a large supply, which still continues and fills a public swimming pool. The strata below the salt water were comparatively dry, containing traces of oil in gumbo at 2300 feet, at which depth the well was abandoned. A second well is now being drilled at the city water-works, in the hope of obtaining sufficient natural gas to replace the coal used for the city's electric lighting and for the municipal electric car line. Considerable natural gas has already been obtained. A well of large diameter, if sunk at least 2000 feet, might obtain gas in this locality.

Natural gas and traces of oil were found at a depth of about 500 feet in drilling the city water well at Tallulah, but the quantity was very small. Seepage of gas and traces of gas in many water wells have been reported also from Lake Providence, about 20 miles north of Tallulah.

A well drilled for the city water supply in Ruston showed seepages of oil and a little gas. It is reported that large natural gas seepages occur about 25 miles northeast of Ruston, near Marion, in Union parish.

The indications of natural gas in the regions visited have been sufficient to arouse much interest and to induce the expenditure of considerable money, but further operations should be delayed until the State makes a thorough examination of the geologic structure of the region.

Bureau of Mines.

The act establishing a bureau of mines in the National Department of the Interior became effective July 1. The law contemplated the transfer of the entire technologic branch of the United States Geological Survey, the mine accident investigations, fuel investigations, structural materials investigations, the entire personnel, property and equipment, to the bureau of mines, but the sundry civil appropriation act amended the law to such an extent that the structural materials investigations, including the personnel and equipment for these investigations, went to the bureau of standards, Department of Commerce and Labor.

Carrying out the spirit and intent of the law so amended, the Secretary of the Interior has transferred to the bureau of mines the investigation of mine accidents and fuels, together with the personnel and equipment of these investigations, and has transferred to the bureau of standards the structural materials, investigations and the employes of the technologic branch of the survey engaged in these investigations. The fully-equipped testing station at Pittsburgh also goes to the bureau of mines.

The bureau of mines, therefore, includes the mine accidents and fuel investigations, for which an appropriation of \$410,000 was made by Congress. The total appropriations for the bureau, including salaries, rent and expenses of removal, amount to \$502,200.

The work of the bureau of mines for the

first year will be a continuation and expansion of the work carried on by the technologic branch of the Geological Survey. The law in itself provides for a variety of other problems that properly belong to the bureau of mines, and which should eventually be undertaken, such as methods of mining and metallurgical processes, but these activities will be deferred for the most part until Congress gives additional authorization in the shape of adequate appropriations. The spirit of the debates in Congress, both on the bureau of mines legislation and on the appropriation items, emphasized the desire to regard the mine accidents investigations as urgent, and this will be the feature of the work.

In all, \$310,000 was appropriated for mine accident investigations. Of this sum, under the general plans approved by the Secretary of the Interior, \$120,000 is to be spent on the rescue stations, \$36,000 for housing nine stations, \$34,000 for equipping eight new stations and \$10,000 for additional equipment for five existing stations. The allotment for the investigation of explosives is \$10,000; for electricity in mining, \$14,000; appliances for preventing mine accidents, \$8000; examination and codification of mining laws, \$5000, and other technologic investigations, ore treatment, etc., \$10,000. For the analyzing and testing of the coals, lignites, ores and other mineral fuel substances belonging to or for the use of the United States, \$100,000 was appropriated. Of this amount, \$35,000 will be spent in the chemical and physical investigation of fuels, \$25,000 in the inspection of Government fuel purchase, \$22,000 in fuel efficiency investigations, \$5000 in lignite and peat investigations and \$4000 in briquetting investigations.

To Lease Coal Rights.

In connection with the plans of W. W. Johnson of Gordon, Tex., for developing his coal properties near Gordon, the MANUFACTURERS RECORD is informed that he owns 4300 acres of land and has driven 16 test holes, showing coal of equal thickness and quality as the Strawn field at Thurber and Strawn mines. It is estimated that the property contains 12,600,000 tons of coal, having a slate roof and fire-clay bottom, while the lands are said to be exceptionally good for agricultural purposes. Mr. Johnson intends to sink and timber four shafts and lease the coal on a royalty, giving lessee the use of 100 acres of land for townsite during the life of the lease. He has about completed the dump for an artificial lake covering 100 acres, which will afford a water supply for a town and six coal shafts. It is his intention also to construct other reservoirs and give the lessee of the property the use of water for townsite and mining purposes, store, blacksmith shop, livery stable and other privileges. Before opening negotiations for the lease of the coal rights he expects to sink and timber one shaft, and will soon begin work on shaft No. 1.

Alabama Operators' Outing.

The program as arranged for the annual outing and social meeting of the Alabama Coal Operators' Association, to be held at East Lake on July 30, includes the following features: "Mine Rescue Work," J. J. Rutledge of the United States Geological Survey; "Use of Electricity in Woodward Iron Co.'s Mines," Morris W. Bush; "Safety in Coal Mines," E. H. Cox, general superintendent of coal mines for the Tennessee Coal, Iron & Railroad Co.; "Precautions in Use at Mulga Mines Before and After April 20," Milton H. Fies, general superintendent; "Mine Gases," James Hillhouse, chief mine inspector for the State; "Mine Inspection and Ventilation," Edward Flynn, chief

mine inspector for the Tennessee Coal, Iron & Railroad Co.; "The Use of Sprays at Banner Mines," Erskine Ramsay, vice-president Pratt Consolidated Coal Co.

Baryte Along the Clinchfield.

[Special Cor. Manufacturers Record.]
Pactolus, Tenn., July 23.

Among other mineral resources which have been rendered accessible by the building of the Carolina, Clinchfield & Ohio Railway, the baryte deposits of Sullivan and Washington counties, Tennessee, seem worthy of special notice.

Recently a reconnaissance survey of these deposits has been made, and the results, while naturally incomplete, indicate that this district will probably become an important factor in the production of baryte. Starting near Pactolus, the mineral may be traced through a distance of 20 miles or more to beyond Fall Branch. Along this line outcrops marked by abundant float are numerous, and there appear to be many places where mines could be profitably opened.

The quality of this baryte as far as it can be determined through outcrop samples is uniformly excellent. By far the greater part of the material to be seen is of crystalline structure, pure white and almost chemically pure.

Some 25 years ago a railroad through this section was contemplated, and at that time these deposits received some little attention. A small mill was built at Pactolus and a considerable amount of baryte was ground here in anticipation of a profitable market. With the failure of the railroad scheme it became necessary to haul its product 15 or 20 miles over rough country roads to Jonesboro for shipment, and under these circumstances the enterprise soon died a natural death.

With a first-class railroad now passing through the very heart of this district the time is ripe for a revival of the industry, and while much prospecting must be done before it can finally be established on a large scale, the chances for its ultimate success look very bright, indeed.

Increased Coal Tonnage.

A report of the department of mines of West Virginia for the fiscal year ended June 30 shows a net tonnage of coal along the lines of Norfolk & Western Railway of 10,087,427 tons. For the year 1908 the gross tonnage amounted to 13,305,617 tons, and for 1909 to 15,079,595 tons. The tonnage from the several fields for 1910 was as follows: Pocahontas field, 9,529,755 tons commercial and 1,186,794 tons company; Tug River field, 1,487,504 tons commercial and 263,720 tons company; Thacker field, 1,487,503 tons commercial and 578,387 tons company; Kenova field, 659,080 tons commercial and 184,835 tons company; Clinch Valley field, 680,632 tons commercial and 52,217 tons company.

Immense Coal Contract.

A coal contract involving between \$20,000,000 and \$30,000,000 has been entered into by the Davis Coal & Coke Co., B. F. Bush, president, Continental Building, Baltimore, and the Bethlehem Steel Co., Charles M. Schwab, president, South Bethlehem, Pa. This contract provides for the delivery by the Davis Coal & Coke Co. at its mines to the Bethlehem Steel Co. for by-product coke ovens to be erected, of a minimum of 730,000 tons and a maximum of 2,000,000 tons of coal per year, extending over a period of 20 years. To meet the demands of the contract the Davis Coal & Coke Co. has planned to expend about \$1,500,000 for installing new equipment and developing new mines, and is at present opening three new shaft mines and one drift mine near Thomas, W. Va., which are expected to be ready for

operation by next summer. The plants will be of fireproof construction and equipped with modern machinery and appliances, including a central power station at Thomas. In addition several spur-tracks have been constructed. The present output of the company is 8000 tons, and the proposed increase is 4000 tons. In addition to its other facilities, the company will erect at least 250 double miners' houses, and has already awarded contracts for a portion of the construction. Bids for other construction will be received by Lee Ott, general superintendent at Thomas. Delivery of coal on the contract will begin in 1912.

Important Coal Orders.

Within the past few days several important coal orders have been placed with companies in the Birmingham district, according to reports from Birmingham. It is announced that the New Orleans & Northeastern Railway has contracted for 785,000 tons, although a previous report stated that this company's orders amounted to approximately 300,000 tons. The Central of Georgia Railway is reported to have awarded contracts for 250,000 tons, while the Queen & Crescent Route has contracted for 100,000 tons.

To Develop West Virginia Lands.

Formal organization of the Webb Coal & Mining Co., with a capital stock of \$100,000, has been effected with the following officers: Lewis M. Webb, president and treasurer; E. H. Shenk, Miami, W. Va., vice-president; B. R. Appleton, secretary, and John Holmes, general manager. It is announced that the company will develop coal lands in Kanawha county, near Charleston, and has already begun two drift entries. The mines are located on the Chesapeake & Ohio Railroad, and a new mining town will be established to be known as Garrison.

The Sunshine Company.

The Sunshine Coal & Coke Co. of Charleston, W. Va., has incorporated with an authorized capital stock of \$1,500,000. Its incorporators are Francis Rocks, J. E. Rocks, T. J. Lynch, J. R. Topham and W. J. Sturgiss, all of Uniontown, Pa.

Mining Notes.

S. B. Chapman of Andrews, N. C., writes to the MANUFACTURERS RECORD that titanite of iron is found in that section.

Bituminous coal hauled by the Baltimore & Ohio Railroad during June is estimated at 2,615,813 tons. As compared with the corresponding month last year, this is an increase of 738,225 tons.

The Carolina Ore Co. of Winston-Salem, N. C., has incorporated with a capital stock of \$125,000 to develop mines and quarries. Its incorporators are F. H. Fries, T. W. Huske, J. L. Ludlow and W. T. Brown.

The regular monthly meeting of the Southern Appalachian Coal Operators' Association was held last week at Knoxville, Tenn. A report of the secretary shows that the association is on a firm financial basis.

Swift & Co. in New Orleans.

Reports from New Orleans state that Swift & Co., Chicago, have purchased 21 acres of land in Jefferson parish, near Harvey Canal, for \$42,440, and will erect a modern soap factory and other plants, included in which will probably be an extensive cottonseed-oil mill. It is understood that the enterprise will involve an expenditure of about \$500,000. P. A. Balmer is the New Orleans manager of Swift & Co.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Standard Knitting Mills' Addition.

The Standard Knitting Mills of Knoxville, Tenn., will build an extensive addition, and the MANUFACTURERS RECORD presents the following summary of the plan:

The Standard company has purchased for \$31,500 the property adjoining present plant, and will erect thereon suitable buildings for a knitting mill with a daily capacity of 600 dozen men's high-grade ribbed underwear. It has placed orders with the Howard & Bullough American Machine Co. of Pawtucket, R. I., for 50 revolving flat cards, 50 spinning frames (about 12,000 spindles) and auxiliary machinery for making two-ply high-grade yarns for the knitting mill. About 50 latch needle knitting machines and 200 sewing machines will be installed; also a complete bleaching, dyeing and drying plant.

This company now has a daily capacity of 600 dozen men's 10-pound and 12-pound popular-priced ribs, and with the addition making high-grade ribs will have an annual capacity of 350,000 dozen and a cotton consumption of 7000 bales, giving employment to 800 operatives.

The product is sold direct from the mills to the wholesale trade. The company's president is E. E. McMillan; H. B. Branner is treasurer, and Joseph T. Brownlee is secretary-general manager. The company is capitalized at \$500,000.

Plans for the new buildings are being prepared, and contracts will be let by the end of August. Steam power will be used, about 450 horse-power. The yarn-mill building will be of standard brick and mill construction, costing about \$50,000. Local contractors will probably receive the contract.

The Entwistle Mill.

The Entwistle Manufacturing Co. of Rockingham, N. C., has about completed its buildings and is installing the initial equipment of machinery, including 20,000 spindles, 500 looms, 650 horse-power steam plant, etc. The C. & G. Cooper Company, Mt. Vernon, O., is furnishing the steam engine; Whiting Machine Works, Whitingville, Mass., the spinning and carding machinery; Lowell (Mass.) Machine Shop, the roving machinery; Draper Company, Hopedale, Mass., the looms. Details of the Entwistle plant have previously been stated by the MANUFACTURERS RECORD. The company is capitalized at \$500,000.

To Build an Addition.

The Jordan Manufacturing Co. of Wellford, S. C., has begun the erection of a 60-foot addition, and will install machinery for manufacturing counterpanes and towels. This company now manufactures quilts.

A \$25,000 Knitting Company.

The Elliott Knitting Mill of Hickory, N. C., has been chartered with a capital stock of \$25,000 by J. D. Elliott, H. J. Holbrook, E. L. Yerly and P. P. Jones.

American Hosiery Co.

The American Hosiery Co. of Osage, Okla., has been incorporated with a capital stock of \$100,000 by Browne Cornel-

ison, Security Building, Oklahoma City, Okla.; Wallace Swigert, also of Oklahoma City, and G. L. Grace of Reading, Pa. This company will establish the Osage mill mentioned recently.

To Install Electric Drive.

The Hampton (Ga.) Cotton Mills will install the electrical drive, replacing steam power in a 10,000 ring spindle plant. This company has contracted for electricity from the transmission lines of the Central Georgia Power Co. of Macon.

Star Underwear Mills.

The Star Underwear Mills of Kansas City, Mo., has been incorporated with a capital stock of \$15,000 by Samuel A. Walker, Marshall S. Walker and A. S. Lepham, Jr.

To Manufacture Damask.

The Salisbury (N. C.) Manufacturing Co. will be organized by Gilbert F. Hambley, T. J. Jerome, C. C. Adams and A. H. Boyden, to establish a damask mill. Mr. Hamburg was previously mentioned in this connection.

W. H. Hunt and associates of Newberry, S. C., plan the organization of a company to build a cotton mill. A capital stock of \$300,000 is proposed.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS' RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Wants American Products.

J. S. Dannigan, manager of the Kitah Polish, 8 Impasse Gabriel, Paris, Asnières (Seine), France, writes the MANUFACTURERS RECORD:

"We desire to communicate with manufacturers who have articles which could be introduced on the French market. We will thank you for assistance you may give us."

"Following is an outline of our ideas, and we shall be pleased to furnish further details:

"American goods have a ready sale here, but frequently cannot compete with the French or German article on account of excessive tariff."

"We can in many cases overcome the difficulty by receiving goods in rough state or in parts. We have a large factory at our disposal wherein we can finish, assemble, store and ship."

"It would be necessary to furnish us with details and samples (prepared), and we will choose those articles which may be of interest and place same on market."

Wants Salt Briquetting Machinery.

C. C. MacKee Company, 4 Queens road, Hongkong, China, writes the MANUFACTURERS RECORD:

"We would be glad if you would put us in touch with anyone who can quote in detail on machinery for compressing salt into bricks for handy transportation purposes, the object of making salt into bricks being the elimination of salt smuggling, which is very prevalent here in China. The present outfit wanted is simply two machines, one of about five tons per day capacity, the other of 15 or 20 tons per day capacity, the size of salt bricks on the small machine to weigh one catty each, and on the large machine 10 catties each."

"We will appreciate anything you may be able to put us in touch with promptly. We desire complete catalogues and illustrations, as well as prices and details."

MECHANICAL

The Doremus Gin.

Mr. Daniel J. Sully of the General Cotton Securities Company, with G. Scott Dalgleish of Cairo, Egypt, and Mr. C. J. H. Woodbury of Boston, witnessed last week the test runs of the new Doremus gin at the plant of the Thomas-Fordyce Manufacturing Co. at Little Rock, Ark., where it was made. Discussing the invention, Mr. Sully was quoted as follows:

"Mechanically, the gin consists of several gangs of saws arranged so that the saws overlap each other and co-operate in the ginning. The Doremus plan, as it was first formulated, was to arrange these saws along a level or an inclined frame, so that the seed cotton, starting at one end, would travel to the other, each gang taking some of the lint, and the clean seed would be delivered at the end. But we now have the Fordyce modification of the original invention, which places the gangs of saws in a crescent shape, so that the seed cotton forms a roll and revolves in front of the saws until the ginning operation is finished."

"Thus the seed that has traveled around once and still is not stripped of all its lint may go around again, and even again and again, indefinitely, until it is entirely free from fiber. This arrangement gives the gin a greater capacity and enables it to turn out the seed much cleaner than has been done heretofore by any ginning system. The same idea can be used, of course, by oil mills as a linter, in which case it will get off all the lint that the seed contains."

"The saws in the Doremus gin are only half the diameter of those used in the Whitney gin; therefore, they cost only one-fourth as much, and they do not need to be hammered in order to prepare them for use in the gin."

"The general introduction of this gin will work a revolution in the handling of American cotton, and it will prove to be a great boon to all cotton-growers. The length of the fiber that they will be able to get from their seed will be at least one-eighth longer than that they get from the present ginning process. What this will mean to the cotton-growers hardly can be appreciated."

"The whole cost of the new gin may amount to a little more than that of the Whitney machine, but when you take into consideration the Doremus gin's capacity it will be cheaper than the old style in the end."

Motor-Driven Wood Borer.

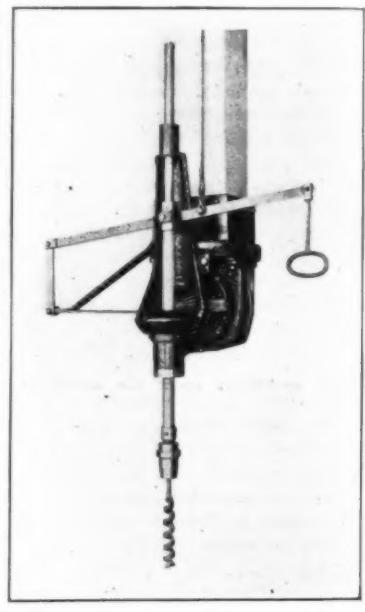
The application of the electric motor for driving machine, woodworking and other tools, thereby eliminating practically all line shafting, countershafts, hangers, bearings, pulleys, bolts, together with their attendant evils of dust, dirt, broken belts and darkness, plus endless expense, annoyance and lost time, has opened up to manufacturers a new field in which a great many excellent examples showing great ingenuity of design have been brought out. While the earlier examples were often carried out on rather crude lines, the latest designs, incorporating motor and tool into a single unit, show very satisfactory results, indicating that specialized effort has been given to both the mechanical and electrical perfection of such devices.

When the General Electric Co., at its Schenectady (N. Y.) plant, erected a new carpenter shop it was designed exclusively for individual motor drive. The so-called "skid" building, one of the principal departments of the redesigned shop layout, called for the boring of a great number of holes, varying from three-quarters to one inch diameter, and from 2 to 14 inches

in depth, with a three-inch counterbore for the heads of the bolts. To improve upon previous methods, it was found expedient to employ motor-driven machines for this purpose. The old belt-driven machines were therefore scrapped and substitution made by new motor-driven machines, especially designed and constructed by this company.

This machine, as may be seen by the accompanying illustration, consists of a cast-iron socket, to the under side of which the motor is bolted. The socket is securely suspended from the lower end of a 10x10-inch timber, which, in turn, is supported and braced from the ceiling or roof beams. The bracket carrying the drill spindle is bolted both to the socket and to the motor head. The drill spindle is made in one piece, and driven direct from the motor by means of bevel gearing with a ratio of 2 to 1, the motor gear being 3½ inches diameter, while the spindle gear is seven-inch pitch diameter, the spindle speed being 600 revolutions per minute.

The drill spindle in this case is driven by a General Electric one-and-one-half-horse-power induction motor, although a direct-current motor could be used with equally good results. The travel of the bit



MOTOR-DRIVEN WOOD BORER.

is actuated by means of a lever attached to the spindle. The spindle is balanced by a counterweight fastened to this lever, as shown. The new wood-boring machine has been in existence for about two years, proving entire suitability to the work for which it was designed. It has given entire and continuous satisfaction both to the manufacturers of the device and the operators, the latter preferring it to the old-style machine, with its troublesome belts and bearings, prone to run hot in spite of every precaution. Due to the increasing output of the shop, it became necessary to have an additional machine of the same type, which has been recently installed with results equaling those secured with the first unit.

The complete machine, as may be seen, is extremely simple, has a very small number of parts, is compact, and can be readily taken apart, if necessary, to repair any part of the drill or motor. Only two bearings are required in addition to those of the motor.

The latest issue of the Journal of the American Society of Engineering Contractors publishes an interesting discussion by Messrs. Gustave Kaufman, F. E. Cudworth, Daniel J. Hauer and J. L. Ingle, Jr., of the paper by Mr. Ingle on an economical substitute for a timber trestle in making a high embankment.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

The Daily Bulletin of the Manufacturers' Record is published every business day in the year for the purpose of giving the earliest possible news in regard to new industrial, railroad and financial enterprises organized in the South. It is invaluable to contractors, manufacturers, engineers and all others who want to get in touch at the earliest moment with new undertakings or the enlargement of established enterprises. The subscription price is \$25 a year. All advertising contracts in the Manufacturers' Record extending over a period of three months include a subscription for the length of time of the contract to the Daily Bulletin.

BRIDGES, CULVERTS, VIADUCTS

Ala., Centerville.—Birmingham, Selma & Pensacola Railroad Co., H. E. Raynolds, secretary, will construct iron bridge over Cahaba River in connection with proposed route from Centerville to Selma, etc.; will also build number of wooden trestles.

Ark., Texarkana.—Kansas City Southern Railway, A. F. Rust, resident engineer, Kansas City, Mo.; Texas & Pacific Railway, B. S. Wathen, chief engineer, Dallas, Tex., and St. Louis Southwestern Railway, M. L. Lynch, chief engineer, Tyler, Tex., have tentative plans for construction of steel viaduct over Oak St.; 20-foot carriage driveway and concrete sidewalks; estimated cost, \$100,000.

Ga., Augusta.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will construct pivot pier and draw span at Washington St. bridge.

Ga., Griffin.—Spalding county will vote August 23 on issuance of \$50,000 bonds for bridges and roads. Address County Commissioners.

Ga., Columbus.—Board of Public Works, W. C. Campbell, superintendent, awarded contract to Capt. B. H. Hardaway, Columbus, for construction of concrete-steel arch bridge (Mein style) over Chattahoochee River at Dillingham St.; cost \$115,000. (Lately mentioned.)

Ky., Louisville.—Jefferson county and Hardin county will construct wagon bridge across Salt Lake; estimated cost, \$30,000. Address C. F. Taylor, Jefferson County Commissioner, Louisville, or W. C. Montgomery, Hardin County Commissioner, Elizabeth town, Ky.

La., Jonesville.—Frank Janes, Oak Grove, La., will erect 300-foot bridge across Tiger Bayou and 120-foot bridge over Pine Bayou in connection with construction of six-mile timber road from Terry to Jonesville; engineer, S. Taylor Jackson, Pioneer, La. (See "Machinery Wanted.")

Md., Baltimore.—Harbor Board will receive bids until August 17 for construction of steel and concrete bridge across Jones Falls at Pratt St.; O. F. Lackey, engineer (lately mentioned). (See "Machinery Wanted.")

Md., Baltimore.—Board of Awards, J. Barry Mahool, president, City Hall, will receive bids until August 3 for construction of concrete-steel bridge across Stony Run, Wyman Park. (See "Machinery Wanted.")

Mo., Joplin.—Missouri, Kansas & Texas Railway Co., S. B. Fisher, 407 Wainwright Bidg., St. Louis, Mo., engineer, will erect three-pile trestles and some concrete culverts in connection with proposed 3½-mile line from milepost 436.55 to new union depot, Joplin.

N. C., Wilmington.—City will receive bids until August 16 for erection of superstructure of steel highway bridge; approximately 142 feet; C. R. Humphreys, City Engineer. (See "Machinery Wanted.")

N. C., Winston-Salem.—I. G. Lawrence, Durham, N. C., has contract for erection of reinforced concrete culvert; 5½ feet high, 4½ x 40 feet; construction begun.

Okla., Cherokee.—Kansas City Bridge Co., Kansas City, Mo., has contract at \$10,000 for construction of steel bridge across Salt Lake Fork.

Okla., Grandfield.—Company has been formed by J. G. Hardin, C. W. Wigham, W. G. Webb, all of Wichita Falls, Tex., to construct wagon bridge across Red River; 400 feet long.

S. C., Greenville.—Bridge Commissioners awarded contract at \$31,900 to Carolina Concrete Co., Greensboro, N. C., for construction of concrete bridge across Reedy River; 68x300 feet; plans by H. S. Jaudon Engineering Co., Savannah, Ga. (Lately mentioned.)

Tenn., Bartlett.—W. T. Bond, 65 Madison Ave., will receive bids until August 2 for construction of bridge and about 500 feet levee work. (See "Machinery Wanted.")

Tex., Dallas.—Ira G. Hedrick, 1118 McGee St., Kansas City, Mo., consulting engineer for Dallas county, advises that bids will be advertised for construction of Dallas-Oak Cliff viaduct after right of way has been secured; as previously stated, plans and specifications are completed; structure to be of reinforced concrete arch type; total length about 5100 feet; clear roadway 40 feet wide, with two 5-foot-wide sidewalks; total yardage of concrete in structure approximately 42,000; \$600,000 available; consulting engineer to supervise construction.

Va., Richmond.—Richmond, Fredericksburg & Potowmack Railroad Co., C. W. Culp, general superintendent, Richmond, will construct trestles or tunnels on grade crossings of all streets and highways intersected by Belt Line.

W. Va., Gassaway.—Elk River & Little Kanawha Railroad awarded contract to T. W. Kirkbride, 16½ Campbell Ave., Roanoke, Va., for erection of 41 bridges to cost \$40,000; contractor is commencing construction of bridges, and also has contract for five miles of grade and masonry for same company at cost of \$25,000.

CANNING AND PACKING PLANTS

Ga., Toceon.—Toceon Canning & Creamery Co. incorporated with \$10,000 capital stock by E. P. Simpson, L. A. Simpson, D. J. Simpson and E. P. Simpson, Jr.

La., Jefferson Parish.—Swift & Co., Chicago, Ill. (recently noted to have purchased site for plant), will, it is reported, establish cottonseed-oil mill, soap factory and several small plants, expending approximately \$500,000; construct docks to facilitate handling products; P. A. Balmer, New Orleans, La., manager.

Mo., Stoutland.—Sanitary Canning Co. incorporated with \$2000 capital stock by James F. Price, E. A. Thomas, William Burke and others.

Okla., Woodward.—Woodward Canning & Manufacturing Co. incorporated with \$20,000 capital stock by D. R. Lanune, Wm. Peterson, J. W. Hamilton and others.

Tex., Beaumont.—Beaumont Orange & Fig Co., W. W. Kyle, president, will establish cannery. (See "Land Developments.")

Va., Luray.—Luray Canning Co. incorporated with \$15,000 capital stock; R. H. Pittman, president and general manager; L. N. Dovel, vice-president; J. W. Grove, secretary.

CLAYWORKING PLANTS

Mo., Poplar Bluff—Brick and Tile.—Dalton Brick & Tile Co. incorporated with \$10,000 capital stock by Louis F. Dalton, R. F. Dalton and Lawrence Lacey.

N. C., Durham—Brick.—Wall-Teer Brick Co. incorporated with \$10,000 capital stock by W. L. Wall, Marvin L. Teer and others.

Tex., Harlingen—Pressed Brick.—Harlingen Brick Works purchased and will install machinery for manufacturing 20,000 pressed bricks daily.

Tex., Laredo—Pressed Brick.—Reiser Pressed Brick Co. incorporated with \$25,000 capital stock by S. N. Johnson, E. A. Atlee and L. A. Reiser.

W. Va., Wheeling—Pottery, etc.—Wheeling Sanitary Manufacturing Co. incorporated with \$250,000 capital stock by Jack Wright and others; in combination of Riverside pottery, Tiltonville pottery and American Sanitary Manufacturing Co. of Elm Grove; will expend \$40,000 to \$50,000 for improvements, including improving and enlarging Riverside plant and almost doubling capacity; will manufacture iron and earthenware sanitary enameled goods. (Previously mentioned.)

COAL MINES AND COKE OVENS

Ala., Littleton.—Pratt Consolidated Coal Co., Birmingham, Ala., has purchased Little Warrior coal property.

Ala., Ragland.—Ragland Coal Co., W. T. Brown, president, will, it is reported, increase output of mine; will mine from 400 to 500 tons daily.

Ky., Harlan.—Clover Fork Coal Co. incorporated by Felix Lewis, A. B. Cornett and D. B. Cornett to develop 800 acres of coal lands on Kitts Creek.

Ky., Cary.—A. C. Blowers, Pineville, Ky., has purchased Straight Creek Colliery Co.'s property at Left Fork of Straight Creek; will increase output of mines.

Ky., Harlan.—F. B. French, Knoxville, Tenn., has secured lease on three tracts of coal land in Harlan county and will develop.

Ky., Louisville.—Peerless Coal & Mining Co. incorporated with \$10,000 capital stock by Carl F. Bierach, Thomas A. Murphy and Paul B. Collins.

Ky., Providence.—Gaines Coal Co., incorporated with \$5000 capital stock by S. J. Gaines, W. L. Doane and J. T. Edwards.

Tenn., Knoxville.—Calorific Coal Co. incorporated with \$25,000 capital stock by E. H. Stegall, T. G. McConnell and others.

Tex., Gordon.—W. W. Johnson (recently noted to construct lake, etc.) states he has about completed dump of artificial lake covering 100 acres; water supply for town and six coal shafts; average depth of lake, 17 feet; proposes to sink and timber four shafts and lease coal on royalty, lessee to have use of 100-acre townsite, rights of company stores, etc.; will build additional reservoirs; work on shaft No. 1 to be started soon.

W. Va., Charleston.—Sunshine Coal & Coke Co. chartered with \$1,500,000 capital stock by Francis Rocks, J. E. Rocks, T. J. Lynch, J. R. Topham and W. J. Sturgiss, all of Uniontown, Pa.

W. Va., Charleston.—Virginia Coal Co., T. A. Kay, general manager, is proceeding with improvements to mines on Coal Fork of Campbell's Creek; will operate three new openings.

W. Va., Charleston.—Cannelton Coal & Coke Co. (previously reported incorporated with \$500,000 capital stock) has no plans ready for announcement; W. C. Franz, general manager, Sault Ste. Marie, Mich.; Frank O. Harris, superintendent, Cannelton.

W. Va., Gary.—United States Coal & Coke Co. is erecting proposed miners' houses; cost \$35,000; contractor, T. W. Kirkbride, 16½ Campbell Ave., Roanoke, Va.

W. Va., Charleston.—New River Securities

Co. incorporated with \$300,000 capital stock by Harrison B. Smith, R. S. Spillman, Buckner Clay and others.

W. Va., Charleston.—Webb Coal & Mining Co. organized with \$100,000 capital stock; Lewis M. Webb, president; E. H. Shenk, vice-president, Miami, W. Va.; B. R. Appleton, secretary; John Holmes, general manager, Garrison, W. Va.

W. Va., Davis.—Davis Coal & Coke Co., Continental Bldg., Baltimore, Md., has planned expenditure of \$1,500,000 for installing new equipment, developing new mines, etc., in connection with 20-year contract to furnish coal to Bethlehem (Pa.) Steel Co.; now opening three new shafts and one drift mine near Thomas, W. Va.; plants to be of fireproof construction and include central power station at Thomas; present daily output 8000 tons; proposed increase 4000 tons; will erect 250 double miners' houses; Lee Ott, general superintendent, Thomas, W. Va., has charge of all purchases.

W. Va., Roderfield.—Flannagan Coal & Coke Co. will increase output of mines.

W. Va., Thayer.—Ridgeview Coal Co. issued bonds for \$300,000 and will make improvements to plant.

CONCRETE AND CEMENT PLANTS

Tex., Bryan.—Mr. Fox of Palestine contemplates establishment of cement plant.

COTTON COMPRESSES AND GINS

Ala., Tuscaloosa.—W. D. Bores, cashier of Tuscaloosa Bank & Trust Co., is interested in establishment of cotton compress by Mississippi party.

Ark., Elaine.—Elaine Gin Co. incorporated with \$2000 capital stock by John D. Crowe, F. S. Burrow, E. M. Allen and others.

Ark., Jacksonville.—Jacksonville Gin Co. incorporated with \$450 capital stock by J. R. Ray, P. W. Dupree, J. H. Ramsey and others.

Ga., White Plains.—White Plains Ginnery & Fertilizer Co. organized by C. M. King and others. (See "Fertilizer Factories.")

La., Alexandria.—Wm. Hill will establish cotton compress with capacity of 250 bales of cotton daily; erect building about 100x150 feet.

S. C., Epworth.—Epworth Ginning Co., W. P. Kinard, president (recently reported incorporated with \$400 capital stock), will operate cotton gin; will erect 60x20-foot building costing \$600; cost of machinery, \$3500.

S. C., Seligville.—J. J. Hardin is reported to install cotton gin.

Tex., Allen.—Farmers' Gin Co. incorporated with \$7500 capital stock by E. Berry, G. F. Matthews and others.

Tex., Bobbin.—Bobbin Gin Co. incorporated with \$3500 capital stock by E. H. Terrell, R. A. Horlick, Geo. Stinson and J. W. Stinson.

COTTONSEED-OIL MILLS

La., Jefferson Parish.—Swift & Co., Chicago, Ill., will, it is reported, establish cotton-oil mill. (See "Canning and Packing Plants.")

DRAINAGE AND IRRIGATION

Ky., Louisville, Ky.—Fiscal Court Commissioners of Jefferson County will receive bids until August 1 for construction of a portion of Mill Creek drain; estimated cost, \$28,000; H. D. Robb, chairman. (See "Machinery Wanted.")

ELECTRIC LIGHT AND POWER

Ala., Hartselle.—City will vote August 22 (postponed date) on \$28,000 bond issue for construction of electric-light plant and water-works; plans for construction by Xavier A. Kramer, Magnolia, Miss. (Recently noted.)

Ark., Grannell.—John P. Logan, A. Coyle and Dr. Meize are interested in organizing company to establish electric-light plant.

Ark., Morrilton.—Morrilton Light & Power Co. (recently reported incorporated with \$20,000 capital stock) succeeds W. H. Ashley Electric Co.; W. L. Moose, president; G. H. Burr, vice-president; Clifton Moose, secretary-treasurer; Chas. A. Wood, manager.

Ga., Lafayette.—City awarded contract to J. B. McCrary & Co., Atlanta, Ga., for exec-

tion of light and water-works plant. (Lately mentioned.)

La., Shreveport.—City opened bids July 26 for equipment for power plant; will install 225-horse-power engine and 250 horse-power boiler. Address The Mayor.

Mo., Carthage.—Empire District Electric Co., Joplin, Mo., will, it is reported, establish substation at Carthage; electricity to be obtained from power plant at Lowell; will furnish electricity to manufacturing plants, etc.

Okla., Ada.—McKenna Interurban Co. organized with \$500,000 capital stock; J. J. McKenna, Oklahoma City, Okla., president; will establish power plant near Ada.

Okla., Antlers.—Antlers Light & Power Co. incorporated with \$10,000 capital stock by Jake Easton, Clarke Wesson, L. Silverman and others.

Okla., Grandfield.—E. E. Preston and J. E. Fitzpatrick have petitioned city for franchise to establish electric-light plant; estimated cost, \$10,000.

S. C., Charleston.—Charleston Consolidated Railway & Lighting Co. will, it is reported, build electric-power plant to cost about \$200,000; company telegraphs Manufacturers Record that definite plans have not been decided.

Tenn., Knoxville.—Knoxville Railway & Light Co. awarded contract to L. B. Davidson, Knoxville, for erection of addition to plant to double daily capacity; concrete, steel and brick; cost \$3500.

Tex., Brownsville.—City will vote August 2 on issuance of \$15,000 of bonds for improvements to electric-light plant and water-works. Address The Mayor. (Lately mentioned.)

Tex., Cleburne.—Cleburne Electric & Gas Co. will install power-plant with capacity of 300 K. W. units; also contemplates installing power-plant to furnish electricity for street railway.

Va., Roanoke.—Stafford G. Whittle, Martinsville, Va., and associates will construct dam to develop 450 horse-power on Smith River. (See "Land Developments.")

FERTILIZER FACTORIES

Fla., Marion County.—Florida Bi-Products Co., 110 Temple Court Bldg., Atlanta, Ga. (recently noted), has incorporated with John D. Dickson president, R. E. Waggoner vice-president and manager, W. F. Braeburn secretary, S. E. Smith treasurer; will erect \$60,000 fireproof building and install equipment; product, humus for fertilizers; capacity, 50 tons daily; open for machinery bids. (See "Machinery Wanted.")

Fla., Tampa.—J. P. Hardee plans erection of concrete building to establish fertilizer factory.

Fla., Tampa.—Gulf Fertilizer Co., L. R. Woods, president, purchased site and will erect plant to replace present factory.

Ga., White Plains.—White Plains Ginnery and Fertilizer Co. organized by C. M. King, Z. T. White and others; awarded contract to L. H. Wolf for erection of plant. (Recently mentioned.)

Md., Baltimore.—Baugh Chemical Co., Calvert and Waters Sts., will erect fertilizer shed; frame; 100x200 feet.

Mo., Kansas City.—American Reduction & Fertilizer Co., 20th and Wyoming Sts. (recently noted to rebuild burned plant), will erect \$10,000 fireproof building; mill construction; erection by company; some material purchased; machinery intact and no additional needed; daily capacity, 30 tons fertilizer materials. (See "Machinery Wanted.")

N. C., Washington.—Pamlico Chemical Co. organized with \$100,000 capital stock; J. F. Cowell, president; R. R. Fleming, first vice-president; Geo. T. Leach, second vice-president; Richard Bragaw, secretary; A. M. Dumay, treasurer; establish fertilizer factory; erect main building 135x208 feet; storage building 40x100 feet; office building; construct pier and dock extending 200 feet in Pamlico River. (Previously noted.)

S. C., Cheraw.—Cheraw Fertilizer Co. incorporated with \$50,000 capital stock by H. D. Malloy, D. L. Tillman, S. G. Godfrey and others.

S. C., Charleston.—Germofert Manufacturing Co. completed dry mixing plant and will proceed with erection of other building, including office structure, acid chamber, mill building, burner-rooms, power-house and stockhouse; all one story high except mill, which will be two stories; wood construction except power-house and burner-rooms, which will be brick; construction by J. W. Lanier, Charleston; cost \$100,000. (Previously noted.)

FLOUR, FEED AND MEAL MILLS

Ky., Germantown.—Germantown Milling Co., Geo. W. Woodward, manager (recently reported incorporated with \$10,000 capital stock), is building 40-barrel flour mill.

La., Shreveport.—E. W. Hamiter proposes establishment of flour mill.

Mo., Shelbina.—Shelbina Milling Co. incorporated with \$36,000 capital stock by D. H. Tillett, John M. Gillespie, W. W. Gillespie and others.

Okla., Anadarko.—Anadarko Alfalfa Milling Co. incorporated with \$25,000 capital stock by Thomas Woodward, E. D. Hite and Louis Knight.

Tenn., Dunlap.—New Dunlap Mill Co. incorporated by Robert Mauzy, B. D. Turner, J. M. Smith and others.

Tex., Temple.—Willig Bros.' Flour Mill Co. will install new machinery and increase capacity to 100 barrels of flour daily.

Tex., Whitesboro.—Monarch Mill & Grain Co. (recently reported incorporated with \$10,000 capital stock) will expend about \$20,000 for improvements; mixed feed and corn mill plants; daily capacity, 50 tons fine ground mixed feed; will erect ironclad 80x200-foot warehouse and 40x60-foot millhouse; M. E. Sherman, president; J. M. Sherman, vice-president; T. F. Rodgers, secretary-treasurer. (See "Machinery Wanted.")

W. Va., Flemington.—Flemington Mill Co. incorporated with \$4800 capital stock by Isaac Martin, Thomas W. Brohard, Charles F. Monroe and others.

FOUNDRY AND MACHINE PLANTS

Ga., Atlanta.—Castings, etc.—Withers Foundry and Machine Works, offices, Empire Bldg. (recently noted incorporated with \$80,000 capital stock), continues established plant; does not contemplate enlargement.

Miss., Vicksburg.—Blacksmith Shop.—J. B. Christian is having plans prepared for erection of blacksmith shop; cost \$7500.

N. C., Burlington.—Steam Engines, etc.—Holt Engine Co. incorporated with \$300,000 capital stock by Lafayette Holt, J. M. Cook, W. W. Brown and others; to manufacture engines (reciprocating, oscillating, direct, rotary, etc.).

N. C., Durham.—Brick-drying Machinery.—Warner Forced Air Brick-drying Co. incorporated with \$60,000 capital stock by A. J. Warner, F. S. Thomas, Y. E. Smith and others.

N. C., Durham.—Iron Works.—Union Iron Works Co. incorporated with \$25,000 capital stock; James W. Yeargen, president; Joseph Allen, vice-president; J. M. Wooten, secretary; I. H. Russell, treasurer.

Tex., Dallas.—Radiators.—Pressed Metal Radiator Co. of Kansas City, Mo., contemplates establishment of plant with initial capacity of 10,000 square feet daily.

Tex., Orange.—Iron Works.—Orange Iron Works, E. M. Martin, superintendent, will improve plant, increasing capacity from 80 tons to 115 tons daily.

W. Va., Wheeling.—Molds.—Wheeling Mold & Foundry Co. increased capital stock from \$405,000 to \$500,000.

GAS AND OIL DEVELOPMENTS

Ala., Fayette.—Keystone Gas & Oil Co. incorporated with \$1,000,000 capital stock by C. H. Unger and W. L. Woodruff, both of Birmingham, Ala.

La., Shreveport.—Gulf Pipe Line Co. will construct six-inch pipe line from Shreveport to Lufkin, Tex., a distance of 100 miles, there to connect with main line of company; capacity, 20,000 barrels daily; pipe purchased.

Miss., Kosciusko.—Home Oil & Gas Co. incorporated with \$5000 capital stock by H. W. Gunn, C. C. Fancher, J. T. Kimbrough and others.

Mo., St. Louis.—Glendale Oil & Gas Co. incorporated with \$10,000 capital stock by A. C. Taggart, Henry W. Freudenstein, R. H. Dunaway and others.

Okla., Bartlesville.—Central Fuel Oil Co. is, it is reported, being organized by Samuel Untermeyer of New York city, John W. Gates of Port Arthur, Tex., and English capitalists; capital stock said to be \$20,000,000; plan understood to be purchase of 39,000 acre Bartlesville region oil land and well-flowing 20,000 barrels oil daily.

Okla., Ryan.—Ryan Oil, Coal & Development Co. incorporated with \$100,000 capital stock by J. M. Schrimsher, S. H. Snodgrass, C. W. Miller, A. R. Spring and J. H. Whiteside.

Okla., Tulsa.—Premier Petroleum Co. (composed of Dutch and English capitalists), represented by J. E. Crosbie of Tulsa, purchased

Nowata shallow field oil properties for over \$2,000,000; purchase includes 5000 acres land.

Okla., Tulsa.—United Oil Co. Incorporated with \$10,000 capital stock by William N. Gill, W. G. Sawyer and Charles Richardson.

Okla., Tulsa.—Texas Company of Houston, Tex., purchased Charles Page holdings in Taneche oil field (600 acres, with daily production of 1000 barrels of oil) for \$250,000.

S. C., Due West.—Due West Oil Co. incorporated with \$20,000 capital stock by J. J. Dunn, G. W. Sharp, both of Donalds, S. C.; M. B. Clinkscales, D. S. Edwards, both of Due West, and others.

Tex., Ennis.—North Texas Gas Co. has franchise to install natural-gas system; plan is to pipe Henrietta gas from Dallas, Tex.

W. Va., Amos.—Drybrook Oil & Gas Co. incorporated with \$50,000 capital stock by Perry Yost, H. Haught, H. S. Snyder and others.

ICE AND COLD-STORAGE PLANTS

Fla., Tampa.—Consumers' Ice Co. organized by Fred G. Perry of Tampa and J. C. Hammatt of St. Petersburg, Fla.; will establish 50-ton ice plant; erect building; corrugated-iron superstructure with brick and concrete foundation; machinery purchased. (Lately mentioned.)

Ga., Savannah.—L. Friedman will establish ice and cold-storage plant. (See "Miscellaneous Enterprises.")

Ky., Lexington.—Elmendorf Farm will install cold-storage plant; understood to have awarded contract for erection.

Md., Baltimore.—American Ice Co., Henry H. Heard, manager, 309 Calvert Bldg. (recently noted to erect ice plant and depot) states company purchased land in western part of city, but will not improve at present.

Mo., St. Louis.—Jersey Farm Dairy Co. will install refrigerating plant; plans by Tait-Nordmeyer Engineering Co., Wright Bldg., St. Louis.

Tenn., Somerville.—Southern Realty & Investment Co. incorporated with \$5000 capital stock by Louis Lipsky, B. F. Hurrell, W. T. Loggins and W. M. Mayo.

IRON AND STEEL PLANTS

Va., Graham.—Walter Graham has secured lease on Graham furnace (from Virginia Iron, Coal & Coke Co.) and will install new machinery, etc.

LAND DEVELOPMENTS

Ala., Demopolis.—Allen Planting Co. incorporated with \$5000 capital stock by R. P. Allen, L. S. Allen, M. A. Bailey and others.

Fla., Fort Myers.—Estero Land Co. incorporated with \$30,000 capital stock by E. J. Staten, John M. Jenkins, J. H. Kaufman and others.

Fla., Hastings.—Hastings Development Co. (recently reported incorporated with \$10,000 capital stock) will develop real estate; is reorganization of Hastings Real Estate Co.; developments include 10,000 (or more) acres potato land; G. W. Waller, secretary-treasurer.

Fla., Jacksonville.—Okeechobee & Lake Worth Land Co. incorporated with \$50,000 capital stock by Elwyn N. Moses, Samuel Swearingen and H. L. Bussey.

Fla., Pensacola.—Pensacola Farm Lands Corporation incorporated with \$200,000 capital stock by John B. Scott, H. H. Thornton, J. W. Bullock and others.

Fla., Plant City.—Moyes Land & Investment Co. incorporated; will develop large tract of land for colonization.

Fla., Sarasota.—J. H. Lord, 922 Marquette Bldg., Chicago, Ill., advises that Sarasota-Venice Company, with offices in Chicago and in Sarasota, will develop 100,000-acre tract recently noted purchased (under "Fla., Manatee"); land is in Sarasota Bay district, and will be developed according to adaptations; details not fully decided; A. C. Honore, president; J. H. Lord, vice-president and manager; Potter Palmer, Jr., treasurer; Honore Palmer, secretary, all of Chicago.

Fla., St. Petersburg.—Lake View Farms Co. incorporated with \$5000 capital stock; Wm. M. Davis, president; George Oliver, vice-president and general manager; Robert J. W. Taylor, secretary; Stanley N. Jamieon, treasurer; develop tract of land for trucking; put portion under canvas to provide protection for certain crops.

Ga., Atlanta.—Peachtree Heights Park Co. (recently noted incorporated with \$75,000 capital stock) purchased 480 acres (Collier tract) at \$375,000; proposes expenditure of \$300,000 to \$400,000 in developing residential park; contemplates surveys about August 1;

roads, driveways, bridle paths, parks and residence sites; D. Woodward, president; Walter P. Andrews, vice-president; E. Rivers, secretary-treasurer.

Ky., Crab Orchard.—Company is being organized with \$100,000 capital stock by D. L. Moore, John W. Hughes, W. J. Pottet, all of Harrodsburg, Ky., and others to develop health resort at Crab Orchard Springs; has option on springs and hotel for \$33,000 and plans expending \$50,000 for improvements.

Miss., Utica.—Black Belt Improvement Co. incorporated with \$30,000 capital stock by R. D. Morrison, H. G. Smith, F. L. Anderson and others.

S. C., Greeleyville.—Greeleyville Land Improvement Co. incorporated with \$60,000 capital stock by T. W. Boyle and T. J. Hogan.

S. C., Greenville.—Hugenot Land Co. incorporated with \$30,000 capital stock; Thos. F. Parker, president; H. F. Haysworth, secretary-treasurer.

S. C., Simpsonville.—Piedmont Farms Co. (recently reported incorporated with \$60,000 capital stock by H. P. and P. S. Dew) will develop tract of 400 acres as farming, dairy-ing, poultry and stock-raising lands; cultivate grain, hay and truck.

Tenn., Chattanooga.—Allen Bros., James D., purchased Glenwood addition for \$15,000, containing 100 lots each 50x185 feet; will develop for residence park; open and macadamize streets, construct asphalt sidewalks and stone curbs; six-inch water connections to nearest main; pipe for gas; construct \$2000 ornamental gateway at Dodds and McCallie Aves., etc.

Tenn., Memphis.—Central Avenue Heights Co. organized with \$75,000 capital stock; L. W. Dutro, president; F. D. Smythe, vice-president; R. L. Matthews, secretary-treasurer; purchased 60 acres of land; will subdivide and develop for residence section.

Tex., Beaumont.—Beaumont Orange & Fig Co. (recently reported incorporated with \$15,000 capital stock) organized with W. W. Kyle, president; H. A. Perlstein, vice-president and general manager; J. W. Wilkinson, secretary; P. B. Doty, treasurer; purchased 60 acres of land and will develop orange and fig orchards and establish cannery.

Tex., Liberty County.—Jeff Cochran of Shepherd, Tex., purchased 800 acres of land in Liberty county for \$4200; will establish commercial orchard, nursery and stock farm.

Tex., Sutherland Springs.—Sutherland Springs Land & Town Co. (recently reported incorporated with \$100,000 capital stock) organized with H. A. Spear president, J. L. Kerr first vice-president, Ike T. Pryor second vice-president, A. L. Matlock secretary; will develop Sutherland Springs.

Va., Roanoke.—Stafford G. White and others of Martinsville, Va., engaged architects to lay off land at junction of Danville & Western and Winston-Salem division of Norfolk & Western Railway for town to be known as Kokers; will dam Smith River to develop 450 horse-power.

LUMBER MANUFACTURING

Ala., Mobile.—Howze Lumber Co. incorporated with \$15,000 capital stock; H. Curjet, president; G. H. Howze, vice-president; N. M. Cudalac, secretary and treasurer.

Ark., Camden.—Indiana Lumber & Cooperage Co. incorporated with \$250,000 capital stock; Charles J. Smith, president; William O'Rourke, vice-president; A. Danville, secretary and treasurer.

Ark., Corning.—Star Ranch & Lumber Co., Neelyville, Mo., has not purchased land in Clay county. (Recent report incorrect.)

Ga., Macon.—Bannon Lumber Co. incorporated by Chas. P. and Horace Bannon.

Ga., Tifton.—Atlantic Lumber Co. incorporated with \$25,000 capital stock by R. C. Postell, W. L. Yeomans and E. A. Buck.

Ga., Valdosta.—Panabaker Lumber Co. incorporated with \$3000 capital stock by N. A. Williams and R. L. Panabaker, both of Valdosta, and A. Collins of Washington, D. C.

Ky., Jackson.—Mowbray & Robinson, Cincinnati, O., have purchased 60,000,000 feet of white oak timber in Breathitt county and will install band-saw mill.

La., Long Leaf.—Crowell & Spencer Lumber Co.'s Improvements (recently noted) are estimated to cost \$50,000; Thrall & Shen, contractors, Lake Charles, La., to begin work within next few days; improvements will include 36-foot extension to sawmill; installation of band mill; replacements of power plant and house (steel construction); new planing-mill building; replacement of wood work; installation of new and reconstructed machinery, including blower system for conveying fuel to sawmill.

Miss., Brookhaven.—Central Lumber Co.

Incorporated with \$100,000 capital stock by W. H. Seavy, O. E. Morton, J. E. Seavy and S. E. Morton. (Lately mentioned as increasing capital stock from \$50,000 to \$100,000.)

Miss., Monroe.—Sam Mouton has purchased from Dickinson & Wilkinson 9000 acres of timber land; will install 60,000-foot daily capacity sawmill.

Miss., Tyertown.—O. F. Cassiory will rebuild sawmill reported burned; loss \$5000.

Tex., Jermyn.—Independent Lumber Co. incorporated by J. W. Carter, Oliver Loving and W. F. Stewart.

S. C., Edgefield.—Savannah Lumber Co. incorporated with \$10,000 capital stock by A. J. Davis of McCormick, S. C., and F. P. Rush of Bradley, S. C.

S. C., Madison.—Ingalo Lumber Co. incorporated with \$3000 capital stock by R. H. Smith, John H. Leasia, C. B. Smith and A. M. Leasia.

S. C., Plum Branch.—Savannah Valley Lumber Co. Incorporated with \$10,000 capital stock by A. J. Davis and T. P. Rush.

Tenn., Bristol.—Paxton Lumber Co. will not install band mill recently noted; will use mills now in operation for development of a number of small timber boundaries lately purchased; no further supplies or machinery needed.

Tenn., Bristol.—Bristol Planing Mill Co. has purchased 45 acres of oak timber and will establish band mill with daily capacity of 18,000 feet lumber.

Tenn., Memphis.—Tschudy Lumber Co. (recently reported incorporated with \$25,000 capital stock by E. E. Tschudy and others) purchased plant of Lamb-Fish Lumber Co., Kerr Ave.; plant includes band mill with daily capacity of 30,000 feet hardwood.

Tenn., Memphis.—Mathis & Duntze Timber & Land Co., recently reported incorporated with \$25,000 capital stock, has organized with Chas. Duntze, president; H. S. Shaw, vice-president; A. A. Mais, secretary and treasurer.

Va., Richmond.—Kingsdale Lumber Co. incorporated with \$50,000 capital stock; Fritz Sitterding, president; C. R. Guy, vice-president; F. E. Nolting, secretary and treasurer.

W. Va., Charleston.—Spice Run Lumber Co. incorporated with \$100,000 capital stock by James Flynn, J. F. Clark, C. W. Morton and others; to develop tract of timber in Greenbrier county; install sawmill, etc.

W. Va., Kingwood.—Oakland Lumber Co. incorporated with \$30,000 capital stock by M. Lee Gailey, J. Dare Gailey, Wyke McCaslin, John L. Gailey and others, all of New Castle, Pa.

METAL-WORKING PLANTS

Ga., Augusta—Oil Cups.—Economy Oil Cup Co., 103-116 Montgomery Bldg. (recently noted), has elected Eugene M. Crozier, president; H. E. Fitzgerald, vice-president and general manager; Frank E. Courtney, secretary; M. C. Dowling, treasurer; will continue having cups manufactured under contract with American Can Co. of Atlanta, Ga.; later will erect plant in Augusta, as previously stated.

Ga., Savannah—Turpentine Cups.—American Can Co. awarded contract to J. H. McKenzie's Sons, Augusta, Ga., for erection of additional building recently noted; mill construction; 45x75 feet; plans by company; manufactures turpentine cups.

Tenn., Knoxville—Specialties.—Johnson & Clifton Manufacturing Co. Incorporated with \$5000 capital stock; J. B. Wright, president; to establish plant at 624 North Gay St. for manufacturing sheet-metal specialties.

MINING

Ark., St. Joe—Zinc.—Ozark Mining Co. incorporated with \$50,000 capital stock by W. P. Campbell and others; will develop zinc deposits; establish plant with daily capacity of 100 tons zinc.

Ga., Atlanta—Clay.—Southern Mining Co., W. E. Cantrell, superintendent (recently reported incorporated with \$10,000 capital stock), will mine clay for pottery wares, brick, etc.; machinery and supplies purchased.

Ky., Versailles—Phosphate.—Central Kentucky Phosphate Co. Incorporated with \$100,000 capital stock by E. C. Bowman of Winston-Salem, N. C.; W. B. Alexander and L. H. Baker of Birmingham, Ala., and A. B. Rumley of Kankakee, Ill.; will develop phosphate deposits near Versailles; main office, Lexington, Ky.

N. C., Charlotte—Gold.—Surface Hill Mining & Milling Co. (recently reported incorporated with \$500,000 capital stock) will install complete equipment for development of 6 acres; E. M. Tucker, president; G. S. Pet-

tit, vice-president; M. Groenendyk, secretary-treasurer, 1208 Realty Bldg.; R. Burdge, manager; will open machinery bids August 15. (See "Machinery Wanted.")

N. C., Winston-Salem.—Carolina Ore Co. Incorporated with \$125,000 capital stock by F. H. Fries, T. W. Huske, J. L. Ludlow and others.

Okla., Miami.—Daly Mining Co. Incorporated with \$25,000 capital stock by F. M. Call of Chelsea, Okla.; J. C. Call of Miami, and others.

Va., Elkton—Manganese.—Rockingham Mineral Co., 1325 Park Bldg., Pittsburgh, Pa., will develop manganese deposits recently noted; Mary Campbell mine; 250 acres; estimated output, 100 tons daily; installation of washing machinery contemplated.

Va., Richmond—Granite.—American Stone Co., Box 538, W. T. Moulton, president and general manager, purchased "Philadelphia Quarry," near city; will install additional equipment, including 300-horse-power boiler capacity, air compressor of about 1200 feet per minute capacity, No. 8 crusher, car haul and probably locomotive crane. (See "Machinery Wanted.")

MISCELLANEOUS CONSTRUCTION

Fla., St. Petersburg—Water-front Improvements.—City has postponed recently-mentioned date of election until August 30 for voting on issuance of \$10,000 water-front improvement bonds. Address The Mayor.

La., New Orleans—Levee.—Robert R. Ralston, Captain, Engineers, will receive bids until August 9 for construction of 26,000 cubic yards of levee in Lake Borgne levee district. (See "Machinery Wanted.")

Miss., Memphis—Levee.—M. L. Walker, Major, Engineers, Mississippi River Commission, will receive bids until August 8 for about 1,650,000 cubic yards of levee work. (See "Machinery Wanted.")

Mo., Kansas City—Dike.—Kansas City Levee District Commission awarded contract to Cameron, McManus & Joyce, Keokuk, Iowa, for construction of five miles of earth dike on Harlem side of Missouri River to protect 3000 acres of land; revetment work will be 14 feet high, with riprap 14 feet wide.

Tex., Cotulla—Dam.—Holland-Texas Dam & Irrigation Co., T. N. Picot, president, will receive bids until August 1 for construction of reinforced concrete dam in La Salle county. (See "Machinery Wanted.")

Tex., Port Arthur—Amusement Pier.—Gulf Concrete Construction Co., fifth floor Chronicle Bldg., Houston, Tex., is lowest bidder for construction of Plaza Company's amusement pier; estimated cost, \$150,000. (Previously mentioned.)

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Birmingham Ledger Co. (not Ledger Publishing Co., as recently incorrectly stated) was incorporated with \$100,000 capital stock to succeed Ledger Publishing Co.; will publish Birmingham Ledger; same stockholders, directors and officers; new incorporation is, in effect, an increase of capital. (Officers' names noted in previous item.)

Ala., Birmingham—Contractors.—P. & F. Tile Co., 642 Brown-Marx Bldg., incorporated with \$2000 capital stock; S. E. Hiller, president and treasurer; S. S. Parker, vice-president; M. J. Frey, secretary; marble and tile contractors.

Ala., Birmingham—Garage.—B. B. Comer awarded contract to C. W. Brown, Birmingham, for erection of garage; cost \$9000.

Ark., Almyra—Grain Elevator.—Almyra Elevator Co. Incorporated with \$40,000 capital stock by W. A. Anderson, O. M. Bennett, A. Vos, B. Wood and others.

Ark., Magnolia—Publishing.—J. A. Scarborough and others have organized company to publish weekly agricultural paper and conduct general printing and publishing; will purchase new plant; capital \$6000. (See "Machinery Wanted.")

Fla., Clearwater—Publishing.—Clearwater News Co. Incorporated with \$3000 capital stock by W. F. Hughey, Leroy Brandon, J. E. Nicholson and others.

Fla., O'Brien—Supplies.—Union Supply Co. Incorporated with \$10,000 capital stock by W. A. Roberts, A. D. Wilder, D. H. Wilson and others.

Fla., Plant City—Publishing.—Plant City Courier, Wayne Thomas, editor and proprietor, has ordered machinery recently noted; to replace plant reported burned.

Ga., Albany—Printing.—F. F. Putney awarded contract to John H. Lowe for erection of proposed building for Albany Daily Herald's printing and newspaper plant; size

38x185 feet; brick; fireproof; cost \$15,000; steam heat; electric lighting; freight elevator.

Ga., Atlanta—Supplies.—Fulton Auto Supply Co. Incorporated with \$10,000 capital stock by J. Wickliffe Goldsmith, Jr., Andrew Calhoun and C. W. Fort.

Ga., Savannah—Stockyards, etc.—S. Friedman will establish stockyard, cold-storage and ice plant; water from artesian well on property; will erect building, 102x184 feet, in which all departments will be housed; install platform scales; concrete construction; construction begun; machinery purchased.

Ia., New Orleans—Oil Distribution.—Liberty Oil Co. organized with \$50,000 capital stock; Thos. C. Anderson, president; Fred Nicoll, vice-president; P. A. Lavendar, secretary; Louis P. Samson, treasurer; will erect buildings, tanks, stables, etc.

Md., Baltimore—Grain Elevator.—Western Maryland Railway, H. R. Pratt, chief engineer, Continental Bldg., purchased site adjoining Port Covington terminals and plans construction of grain elevator with capacity of 500,000 bushels.

Miss., Meridian—Medicinal Springs.—Heidelberg Medicine Springs Co. Incorporated with \$10,000 capital stock by J. C. Gardner, John Turner and Charles D. Henderson, all of Mobile, Ala.; will develop Heidelberg Mineral Springs.

Mo., Kansas City—Construction.—Empire Construction Co. Incorporated with \$1,000,000 capital stock by Marlon Parks, M. Strickler and others.

Mo., St. Louis—Construction.—Southern Construction Co. Incorporated with \$20,000 capital stock by R. D. Salisbury, R. E. Cooney, John Leahy and others.

Mo., St. Louis—Railroad and Contractors' Supplies.—Granville Supply Co. Incorporated with \$10,000 capital stock by William A. Granville, John Granville and others.

Mo., Webb City—Lead Smelter.—Webb City Smelting & Manufacturing Co. organized by C. E. Matthews, T. F. Coyne and others; establish lead smelter; erect 11 buildings, as follows: Bagroom, 72x62 feet and 35 feet high; 10 goosenecks and trall; engine-room, 50x30 feet; cupola furnace building, 28x40 feet; jumbo furnace building, 79x20 feet; refining-room, 36x38 feet; mineral building, 72x24 feet; storage building, 56x24 feet; office building, 20x40 feet; working scales and track scales; coke building, 20x40 feet; shop, 26x36 feet; oilroom, 12x24 feet; concrete construction; trenches for foundations completed; water supplied from well to be drilled 900 feet deep; construction by day labor under supervision of R. A. Farnham and J. B. O'Riley of Galena, Mo.

N. C., Bryson City—Cattle Ranch.—Smoky Mountain Cattle Co. (recently reported incorporated with \$200,000 capital stock) organized with J. W. Hawkins of Charlotte, N. C., president; R. Ray Flint of Reno, Nev., vice-president; E. T. Hart of Charlotte, N. C., secretary-treasurer; leased 78,000 acres of land and has option on 222,000 additional acres; will cultivate 10,000 acres for winter forages; begin operations with 10,000 cattle.

N. C., Greensboro—Drugs.—Grissom-Sykes Drug Co. Incorporated. (Recently incorrectly noted as Grissom-Sykes Hardware Co.)

N. C., Raleigh—Publishing.—Mutual Publishing Co., W. F. Marshall, president, will either erect building or enlarge present plant.

R. C., Hartsville—Construction.—Chesterfield Field Construction Co. Incorporated with \$5000 capital stock by H. D. Hatch and M. W. Nicholson, both of Hamlet, N. C.

Tenn., Memphis—Publishing.—World-News Co. Incorporated by Charles Kemp, John Gueo, Isabel H. Peres and others.

Tenn., Nashville—Hardware.—H. D. Lipscomb & Co. Incorporated with \$300,000 capital stock by H. D. Lipscomb, Brown Buford, D. V. Lipscomb and others.

Tenn., Bowle—Hardware.—Schawne Hardware Co. Incorporated with \$50,000 capital stock by A. Schawne, W. A. Schawne and S. W. Heard.

Tenn., Smithville—Sand Elevator.—Company organized with \$5000 capital stock by W. C. Moore and others to establish sand elevator.

Tenn., San Jose—Health Resort.—Terrell Well Co. is proceeding with development of previously-noted property; sold lots, contracted to be improved by purchasers; awarded contract to H. L. Scott & Co., San Antonio, Tex., for large bathhouse, and for 250-room hotel, to cost \$300,000; will expend \$50,000 in beautifying park; has contracted for electric-lights, water-works plant, macadamized streets, etc., at cost of \$250,000.

Va., Danville—Garage.—Virginia City Motor Co. is proceeding with erection of proposed garage. (See "Machinery Wanted.")

Va., Lynchburg—Contracting.—Langhorne & Ballard Company Incorporated with \$175,000 capital stock; C. D. Langhorne, president, Greenwood, Va.; E. K. Langhorne, vice-president, Maneto, Va.; J. D. Ballard, manager, Bedford City, Va.; F. H. Herring, secretary, Greenwood, Va.

Va., Newport News—Publishing.—Daily Press Incorporated with \$25,000 capital stock; L. E. Pugh, president; O. D. Batchelor, vice-president; H. H. Epes, Jr., secretary-treasurer.

Va., Petersburg—Contracting.—Carpenter Concrete Co. Incorporated with \$10,000 capital stock; C. H. Carpenter, president; James I. Joyner, secretary-treasurer.

Virginia—Construction.—Virginia Construction Co. Incorporated with \$125,000 capital stock by Charles H. Johnson, C. Anthony Judge, Wm. L. Bayham and others, all of Philadelphia, Pa.

Va., Portsmouth—Drydock.—Navy Department awarded contract at \$533,784 to William L. Miller of Boston, Mass., for extension of Norfolk Navy-yard Drydock No. 3 from 550 to 732 feet. (Recently mentioned.)

MISCELLANEOUS FACTORIES

Ala., Birmingham—Chert.—Birmingham Chert Co. Incorporated with \$5000 capital stock by Joe R. Cook, W. J. Conniff and others.

Ala., Birmingham—Slag Bricks, etc.—Birmingham Slag Co., Solon Jacobs, president (recently reported incorporated with \$20,000 capital stock), continues operation of former partnership plant; manufactures roofing slag; is experimenting with slag brick; contemplates manufacture of fertilizer from slag.

Ala., Montgomery—Automatic Switch.—Shepherd Automatic Switch Co. Incorporated with \$700,000 capital stock; M. L. Shepherd, president; Nathan Lobman, vice-president; G. E. Kyser, secretary; T. E. Lovejoy, treasurer; will manufacture patented automatic switch for steam and electric railways.

Ala., Mobile—Cocoanut Products.—Agra Produce Co. Incorporated with \$50,000 capital stock; J. M. Friedman, president; G. G. Warr, vice-president; John Craft, secretary; will succeed Edfa Produce Co. and manufacture cocoanut product.

Ark., Texarkana—Glass.—Union Glass Co. will be incorporated with \$100,000 capital stock by R. M. Patterson of Independence, Kans., and others; will establish plant for manufacturing window glass; 36-blower plant; cost not less than \$75,000.

Fla., Blountstown—Blountstown Manufacturing Co. Incorporated with \$250,000 capital stock by Rufus Pennington, C. R. Evans, A. Swent and others.

Fla., Jacksonville—Drugs.—Southern Drug Manufacturing Co., Frank A. Adams, president, will erect building recently noted; concrete fireproof structure; six stories; plans by H. J. Klutho, Jacksonville.

Fla., Key West—Cigars.—George T. Weidman of Shiep Weidman Company of Philadelphia, Pa., and S. T. Fisher of Tampa, Fla., will probably establish cigar factory.

Ga., Atlanta—Beverages.—American National Beverage Co. Incorporated with \$200,000 capital stock by Lee H. Battle, E. W. Moorfield and R. E. Grigg.

Ga., Cordele—Cigars.—Lopez Cigar Manufacturing Co. Incorporated with \$20,000 capital stock by J. Lopez, J. B. Ryals and D. E. Thompson; will establish cigar factory in Ryals Bldg. with initial capacity of 100,000 per week. (Recently mentioned.)

Ga., Macon—Brewing.—Acme Brewing Co. will replace steam power by electricity furnished by Central Georgia Power Co.; electrical apparatus purchased.

Ga., Toccoa—Creamery.—Toccoa Canning & Creamery Co. Incorporated by E. P. Simpson and others. (See "Canning and Packing Plants.")

Ky., Clarksville—American Snuff Co. of New York awarded contract to F. W. Katterjohn, Paducah, Ky., for erection of addition to plant; use 1,000,000 bricks in construction; cost \$48,000.

Ky., Louisville—Gas Generators.—Model Generator Co. Incorporated with \$7500 capital stock by H. G. Offutt, C. R. Offutt and Oscar Scott.

Ky., Louisville—Paracamp Manufacturing Co. Incorporated with \$35,000 capital stock by William J. Schwaninger, Walter E. McCulloch, Thomas B. Bohon and others.

La., Jefferson Parish—Soap.—Swift & Co., Chicago, Ill., will, it is reported, establish soap factory. (See "Canning and Packing Plants.")

La., Mansura—Sugar Refinery.—Company is being organized with \$350,000 capital stock

to establish sugar refinery; A. Drouin & Co. are interested.

La., New Orleans—Mail Device.—American Railway Device Co. incorporated with \$300,000 capital stock; T. P. Cummings, president; William Pfaff, vice-president; J. L. Adams, treasurer; J. A. Galbreath, secretary.

La., New Orleans—Blasting Powder.—Charles Arnoudt of Guatemala City, Guatemala, C. A., contemplates establishment of plant to manufacture high-power blasting powder; plan is to build powder-house with daily capacity of 10,000 pounds; Mr. Arnoudt is registered at The Inn, New Orleans.

Md., Weaverton (not a postoffice).—Savage Distilling Co. of Kernstown, Va., will establish distillery.

Miss., Meridian—Paint.—Perry Paint Co. incorporated with \$10,000 capital stock by W. T. Perry, C. M. Rubush and E. S. Bostick.

Mo., Kansas City.—Selfomatic Manufacturing Co. incorporated with \$100,000 capital stock by W. A. Dugall, N. M. Pettingill, W. A. Warren and others.

Mo., St. Joseph—Confectionery.—Mueller-Keller Candy Co. incorporated with \$155,000 capital stock by Henry J. Mueller, F. M. Kehler, W. B. Mitchell and others.

Mo., St. Louis—Tools.—Hall's Patent Tool Co. incorporated with \$50,000 capital stock by James G. Hall of O'Fallon, Ill.; Joseph A. Sauls, Philip Wagner, both of St. Louis, and others.

N. C., Raleigh—Gas Plant.—Standard Gas & Electric Co. has, it is reported, awarded contract for improvements to gas plant, including holder to contain 150,000 feet of gas; cost \$20,000.

Okla., Tulsa—Oil Refinery.—The Texas Company, Houston, Tex., is proceeding with construction of portions of oil-refining plant; has about completed pumping station, 10 tanks, repair shop for machinery and cars, etc.; all buildings of cement construction; has not begun erection of buildings for refinery proper; latest rumor is that company contemplates expending \$3,000,000 for plant with annual capacity 22,500 barrels oil. (Previously reported.)

S. C., Belton—Medicine.—Belton Medicine Co. incorporated with \$2000 capital stock; D. A. Greer, president; Walter E. Greer, secretary-treasurer; A. R. Campbell, manager.

S. C., Gaffney—Medicine.—Littlejohn Medicine Co. incorporated with \$8000 capital stock by J. N. Littlejohn, L. Y. Randall and others.

Tenn., Chattanooga—Factory.—Chattanooga Manufacturers' Association, Broad St., will enlarge building; tentative plans call for erection of three or four additional stories to south half of building.

Tenn., Memphis—Fire Doors, etc.—Saino Fire Door & Shutter Co., W. A. Bickford, president, applied for amendment to charter increasing capital stock from \$10,000 to \$50,000.

Tex., Dallas—Creamery.—Dallas Creamery & Dairy Co. incorporated with \$100,000 capital stock by C. L. Varley, Walter Varley and W. A. Donaldson.

Tex., Dallas—Beverages.—Pepsi Punch Co. incorporated with \$15,000 capital stock by J. A. Gulick, L. H. Tyler and J. H. Erwin.

Tex., Orange—Refinery.—Webster Refining Co. (recently reported incorporated with \$200,000 capital stock) organized with C. D. Webster, president; W. H. Stark, vice-president; F. H. Farwell, treasurer, all of Orange, Tex.; J. H. Heinen, secretary, of Jennings, La.

Tex., Wimberly—Overall Factory.—W. C. Munn, Houston, Tex., is interested in contemplated establishment of overall factory.

Va., Richmond—Plumbing Material, Water Systems, etc.—Duke Heating & Water Co. incorporated with \$25,000 capital stock; T. W. Duke, president; H. S. Rucker, secretary-treasurer.

Va., Suffolk—Cigars.—F. T. Wise Cigar Co. incorporated with \$15,000 capital stock; F. T. Wise, president; F. T. Lord, vice-president; G. S. P. Holland, Jr., secretary-treasurer.

W. Va., Bluefield—Confectionery.—Bluefield Confectionery Co. incorporated with \$10,000 capital stock by W. C. Easley, J. F. Land, Hodge Mason and others.

W. Va., Clarksburg—Bottles.—Travis Glass Co. will expend \$20,000 for improvements to bottle plant; install furnace of 150 tons capacity; also machinery, including glass-working machines; will erect 60x100-foot extension to present building; contracts practically placed.

W. Va., Huntington—Shoes.—Kanawha Shoe Co., Charleston, W. Va., purchased interests of Duberry Wholesale Shoe Co. for \$55,000 and will continue manufacturing

shoes, establishing branch plant at Charles-ton, W. Va.

W. Va., Wheeling—Statues.—John Nickall and others leased building at 2157 Main St. and will manufacture statues from cement and plaster parts.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

La., Shreveport.—Kansas City Southern Railway Co. awarded contract to Arnold Company, 181 La Salle St., Chicago, Ill., for proposed construction, as follows: locomotive shop, car-repair shop, roundhouse, power-house, storehouse, planing mill and terminal facilities; cost about \$400,000.

Tex., Taylor.—International & Great Northern Railway Co., O. H. Crittenden, consulting engineer, Palestine, Tex., will erect three additional concrete buildings, including power-house, sand-drying house and lockers, etc.; cost of buildings, \$15,000.

Va., Newport News.—Chesapeake & Ohio Railway, F. I. Cabell, engineer maintenance of way, Richmond, Va., will, it is reported, expend about \$25,000 for improvements to railroad shops.

ROAD AND STREET WORK

Ala., Dothan.—City will open bids August 5 for construction of approximately 12 miles of sidewalk and curb and guttering. Address The Mayor. (See "Machinery Wanted.")

Ala., Greenville.—Butler county voted affirmatively on bond issue (recently noted) for construction of sand-clay roads; first issue, \$155,000; engineer not employed; H. D. Lampley, Judge of Probate. (See "Machinery Wanted.")

Ala., Montgomery.—Robert Tait, City Treasurer, will receive bids until August 1 for paving approximately 1115 square yards of South Highland Court; also for paving sidewalks on both sides of South Highland Court. (See "Machinery Wanted.")

Ala., Selma.—W. S. Keller, County Engineer, advises as follows relative to road construction recently mentioned: Bonds (previously noted) to amount of \$250,000 to be issued in fall for highway building throughout county; survey, etc., completed for seven miles of road, same to be advertised within few days; practically all work to be done by contract, with probably 50 miles awarded by January, 1911; gravel surfacing; contractors to grade and gravel roads and do all other work, except construction of concrete culverts and bridges; County Engineer in charge.

Ark., De Queen.—City has ordered construction of about four miles of concrete sidewalks. Address The Mayor.

Ark., Pine Bluff.—City awarded contract at \$20,000 to Capital City Concrete Co., Little Rock, Ark., for construction of concrete sidewalks.

Ark., Texarkana.—City will pave Pine St. with gravel, concrete curb and guttering; estimated cost, \$35,000. Address Mayor DeLoach.

Fla., Jacksonville.—City has voted issuance of \$100,000 bonds for street paving. Address The Mayor. (Lately mentioned.)

Fla., Lake City.—City awarded contract to Bigler Bros., Mobile, Ala., for construction of pavement and cement sidewalks previously noted; amount \$25,000; J. W. Layne, secretary Board of Public Works.

Fla., Perry.—City will receive bids until August 25 for paving three to five miles of streets; W. E. Battle, Mayor. (See "Machinery Wanted.")

Fla., St. Petersburg.—City has postponed recently-mentioned date of election to August 30 for voting on issuance of \$67,000 bonds for street improvements. Address The Mayor. (See "Machinery Wanted.")

Fla., St. Petersburg.—City awarded contract for proposed street improvements, as follows: To Eureka Stone & Paving Co., St. Petersburg, for sidewalk on west side of lot No. 1 in block 32; to Georgia Engineering Co., for curbing, grading and bricklaying on 9th St. and Fourth Ave.; city will open bids July 21 for paving 3d St. and First Ave., etc. (Lately mentioned.)

Ga., Atlanta.—City awarded contract to Nichols Contracting Co., \$15 Equitable Bldg., Atlanta, at \$1.25 per yard for construction of bitumen and macadam paving to amount of \$15,000.

Ga., Columbus.—City has awarded contract to Graves-Matthews Paving Co., Birmingham, Ala., for 11,000 yards of brick paving.

Ga., Elberton.—City will vote August 17 on issuance of \$25,000 bonds for roads. Address The Mayor. (Lately mentioned.)

Ga., Griffin.—Spalding county will vote Au-

gust 23 on issuance of \$50,000 bonds for roads and bridges. Address County Commissioners.

Ky., Bellevue.—Board of Council has opened bids for reconstruction of Fairfield Ave. from O'Fallon Ave. to West Corporation line with brick, asphalt or granite; Geo. Trunnell, City Clerk.

Ky., Lexington.—Board of Public Works awarded contract to F. T. Justice & Co., Lexington, for construction of concrete sidewalks on Water St.

Ky., Louisville.—Board of Public Works will receive bids until August 2 for various street improvements. (See "Machinery Wanted.")

Ky., Louisville.—Board of Public Works awarded contract to Standard Asphalt Co., Louisville, for following work: At \$1.82 per square yard for paving Virginia Ave. and Euclid Ave.; \$1.90 per square yard for paving 29th St.; \$1.80 per square yard for paving Brook St.; \$1.80 per square yard for paving 22d St.; \$1.95 per square yard for paving Woodland Beach.

Md., Baltimore.—City awarded contract at \$2,857 to Filbert Construction & Paving Co., 18 Builders' Exchange Bldg., Baltimore, for paving Fayette St. from Lakewood Ave. to Eastern limits with sheet asphalt. (Lately mentioned.)

Md., Havre de Grace.—State Roads Commission awarded contract at \$8000 per mile to E. M. Good, Havre de Grace, for constructing macadamized road between Havre de Grace and Aberdeen; contract also awarded to Mr. Good for macadamizing streets.

Md., Rider.—John M. Dennis will receive bids until August 3 for grading, draining and bridging Dennis Ave., about 6000 feet. (See "Machinery Wanted.")

Md., Towson.—Highway Commission of Baltimore County will receive bids until August 4 for improving Lawrence Ave. from Altamont Ave. to Paradise Ave., distance of 1500 feet; Henry G. Shirly, County Engineer. (See "Machinery Wanted.")

Mo., Kansas City.—City awarded contract to Cleveland-Trinidad Paving Co., Kansas City, for various street improvements.

Mo., St. Louis.—Board of Public Improvements awarded contracts for 6½ miles of various street improvements to cost about \$373,000 as follows: Trinidad Asphalt Mfg. Co., \$22,568.45; John B. Turner, \$6566.35; Wm. H. Redemeyer, \$15,703.12; Ruecking Construction Co., \$59,016.02; Wm. B. Bush Construction Co., \$59,869.90; Webb-Kunze Construction Co., \$15,170.27; Skrainska Construction Co., \$45,371.31; G. Eyrmann & Bros., \$24,972; Harry F. Heman, \$14,149.27; Granite Bituminous Paving Co., \$31,415.74, all of St. Louis.

N. C., Greensboro.—City will pave Buchanan and Davie Sts. with asphalt, bituminous or vitrified brick; about 12,000 square yards; bids to be advertised; J. R. Cutchin, chairman Street Commission.

S. C., Greenville.—City awarded contract at \$81,336 to Bowe & Page, Charleston, S. C., for paving Main St. with vitrified brick. (Lately mentioned.)

N. C., Roxboro.—City has voted issuance of \$22,500 bonds for street improvements; macadamized streets and granolithic sidewalks contemplated; date of opening bids not settled; Nathan Lunsford, Mayor.

N. C., Winston-Salem.—Winston-Salem-High Point-Randleman-Ashboro-Pinehurst Association organized; Leonard Tufts, president, Pinehurst, N. C.; P. H. Hanes, vice-president, Winston-Salem; to construct highway from Winston-Salem to Pinehurst, distance of 80 miles.

Okla., El Reno.—City will receive bids until August 6 for improvements to Bickford Ave., in Hickox Addition, including grading, curbing, guttering and drainage. Address The Mayor. (See "Machinery Wanted.")

Okla., El Reno.—City will receive bids until August 3 for street improvements on Rock Island Ave. Address The Mayor. (See "Machinery Wanted.")

Okla., Shawnee.—City awarded contract to Metropolitan Engineering & Construction Co., Shawnee, Okla., for 52,000 yards of asphalt paving at \$1.99 per yard.

Okla., Tulsa.—T. C. Hughes, City Engineer, advises that city will soon advertise for bids on paving to amount of \$160,000.

Tenn., Dickson.—Dickson county will vote on August 4 on issuance of \$100,000 of bonds for road improvements. Address County Commissioners.

Tenn., Trenton.—City's contract to Novaculite Paving Co., Victoria Bldg., 8th and Locust Sts., St. Louis, Mo., was for furnishing of material for street construction; work to be done by city; \$20,000 available; B. A. Adams, Trenton, engineer in charge. (Recently noted.)

Tenn., Clarksville—Bottles.—Travis Glass Co. will expend \$20,000 for improvements to bottle plant; install furnace of 150 tons capacity; also machinery, including glass-working machines; will erect 60x100-foot extension to present building; contracts practically placed.

W. Va., Huntington—Shoes.—Kanawha Shoe Co., Charleston, W. Va., purchased interests of Duberry Wholesale Shoe Co. for \$55,000 and will continue manufacturing

Tex., Colorado.—City has voted issuance of \$30,000 bonds for road improvements. Address The Mayor.

Tex., Dallas.—City Engineer J. M. Preston has prepared plans and will soon invite bids for paving Pearl St. from Ross Ave. to Live Oak St.; Camp St. from Akard to Lamar, and Griffin St. from Pacific Ave. to Cochran St.

Tex., Dallas.—Dallas county will receive bids until July 29 for graveling Garland and Houseley Rds.; J. F. Witt, County Engineer. (See "Machinery Wanted.")

Tex., Dallas.—City awarded contract to Texas Bitulithic Co., Dallas, for paving Commerce St. from Austin St. to Trinity River.

Tex., Dallas.—City awarded contract for paving Commerce St. from Jefferson to Harwood with creosoted blocks to John C. Underwood at \$67,842.67; for paving Carroll Ave. from Main St. to Reiger Ave. to Texas Bitulithic Co. at \$4506, both of Dallas; invited bids for paving Main St. from Ervy to Houston Sts.

Tex., Dallas.—City awarded contract at \$2.39 square yard to D. J. Grissby, Dallas, for paving Elm St. from Ervy to Central Ave.; creosoted blocks.

Tex., Dallas.—Dallas county will receive bids until July 29 for construction of Edgefield-Avenue Rd.; J. F. Witt, County Engineer. (See "Machinery Wanted.")

Tex., Fairfield.—Freestone county will receive bids until August 15 for construction of system of county roads for Road District No. 1; R. I. Williford, County Judge. (See "Machinery Wanted.")

Tex., Houston.—Wm. M. Rice Institute will undertake road construction. (See "Schools.")

Tex., Houston.—Harris County Commissioners will receive bids until August 9 for paving West Montgomery Rd. with gravel or shell; John B. Ashe, County Auditor. (See "Machinery Wanted.")

Tex., Oakville.—Live Oak County Commissioners, Precinct No. 1, voted issuance of \$25,000 of bonds for road improvements. Address Commissioners.

Tex., Harlingen.—City has voted issuance of \$30,000 of bonds for street improvements and water-works. Address The Mayor.

Va., Norfolk.—City invites bids for grading and paving Pulaski and Charles Sts. with brick, and grading and paving Elizabeth St. with Belgian blocks. Address The Mayor. (See "Machinery Wanted.")

Va., Norfolk.—City has instructed City Engineer to prepare estimates of cost of paving Church St. from Main St. to city's limits. Address The Mayor.

Va., Staunton.—Supervisors of Augusta county have appropriated \$3000 additional for completion of Rockfish Gap macadamized road over Blue Ridge Mountains.

W. Va., Fayetteville.—Fayette county contemplates construction of road; H. A. Gentry, road engineer.

W. Va., Wheeling.—D. G. Brown, clerk Board of Control, opened bids July 26 for grading Belmont St. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Ala., Athens.—City issued \$7500 of bonds for sewer and water-works construction. Address The Mayor.

Ark., Little Rock.—Commissioners of District No. 58 will receive bids until August 1 for construction of sanitary sewers; L. S. Smothers, chairman. (See "Machinery Wanted.")

Fla., St. Augustine.—City will vote November 15 on issuance of \$100,000 of bonds for sewer system. Address The Mayor. (Lately mentioned.)

Fla., St. Petersburg.—City has postponed recently-mentioned date of election to August 30 for voting on issuance of \$5000 bonds for sewers. Address The Mayor.

Ga., Toccoa.—City will vote August 9 on issuance of \$19,000 bonds for sewer system. Address The Mayor. (City previously noted contemplating voting on issuance.)

Ky., Louisville.—Commissioners of Sewerage, 605 Equitable Bldg., will open proposals August 5 for construction of section "A" Western Interceptor in connection with comprehensive sewer system; plans and specifications can be seen at office of Commissioners and of Harrison P. Eddy, consulting engineer, 14 Beacon St., Boston, Mass. (For details see "Machinery Wanted.")

Okla., Burlington.—City awarded contract to Tonkawa Construction Co., Tonkawa, Okla., at \$33,112 for construction of sanitary sewer system.

Okla., Oklahoma City.—City will receive bids until August 1 for construction of lat-

eral sewer in portions of Central Park, Ross-Mann, Grand View, Central Northwest, Pleasant View, Jacquarts, University Addition, etc.; Bob Parman, City Clerk. (See "Machinery Wanted.")

Tex., Amarillo.—City has awarded contract at \$42,548.80 to Matthews Construction Co., Kansas City, Mo., for construction of proposed extension to sewer system.

Tex., Cameron.—City has voted issuance of \$15,000 bonds for construction of sewer system. Address The Mayor. (Lately mentioned.)

Tex., Galveston.—P. Whitworth, captain and quartermaster, Fort Crockett, will receive bids until August 22 for construction of sewer system and sewerage pumping plant. (See "Machinery Wanted.")

Tex., Houston.—Wm. M. Rice Institute will undertake construction of sanitary sewers, drainage system, etc. (See "Schools.")

Tex., McKinney.—City contemplates construction of additions to sewer system. Address The Mayor.

TELEPHONE SYSTEMS

Ark., Sulphur Springs.—Sulphur Springs Telephone Co. incorporated with \$25,000 capital stock by Clyde W. Penwell, Le Roy V. Penwell and Louis Kenworthy.

Ky., Wasilot.—Cumberland River Telephone & Telegraph Co. organized with \$25,000 capital stock by B. N. Worthington and others; contemplates construction of local telephone system and long-distance lines in Cumberland Valley.

La., Forest.—H. H. Moorland has franchise to construct telephone lines on public roads of West Carroll parish.

Mo., Forbes.—Business Men's Telephone Co. Incorporated with \$3000 capital stock by Elmer Slpen, H. E. Milne, G. T. Metcalf and others.

S. C., McConnellsburg.—McConnellsburg Telephone Co. Incorporated with \$5000 capital stock by J. F. Ashe, J. O. More and J. M. Williams; contemplates construction of 12-mile line (metallic circuit) from McConnellsburg to Chester; will install small switchboard with 25 to 50 drops; 15 to 20 phones at start. Address J. T. Crawford.

Tenn., Byrdstown.—Byrdstown Home Telephone Co. (recently reported incorporated by John Lacy and others) will construct 13-mile telephone line; capital stock, \$1500.

Tex., Carthage.—Lacy Telephone Co., J. C. Lacy, president and general manager, will rebuild entire plant from poles to switchboard, including replacing overhead wires with cables.

Va., Buffalo Ridge.—Buffalo Ridge Telephone Co., G. A. De Hart, president, will operate telephone line now under construction; no further machinery needed at present.

TEXTILE MILLS

Ga., Hampton—Yarns.—Hampton Cotton Mills will install electrical power, replacing steam power; has contracted for electricity; equipment, 10,000 ring spindles, etc.

Mo., Kansas City—Underwear.—Star Underwear Mills chartered with \$15,000 capital stock by Samuel A. Walker, Marshall S. Walker and A. S. Lepham, Jr.

N. C., Hickory—Knit Goods.—Elliott Knitting Mills chartered with \$25,000 capital stock by J. D. Elliott, H. J. Holbrook, E. Lyerly and P. P. Jones.

N. C., Salisbury—Damask.—Hambley Manufacturing Co. will be organized by Gilbert F. Habley, T. J. Jerome, C. C. Adams and A. H. Boyden; will establish damask mill previously mentioned.

Okl., Osage—Hosley.—American Hosley Co. incorporated with \$100,000 capital stock by Brown Cornelson, Security Bldg., Oklahoma City, Okla.; G. L. Grace of Reading, Pa., and Wallace Swigert of Oklahoma City. (To establish plant lately mentioned.)

S. C., Newberry—Cotton Goods.—W. H. Hunt and associates plan organization of company to build cotton mill.

S. C., Wellford—Quilts.—Jordan Manufacturing Co. will build 60-foot addition and install machinery for manufacturing counterpanes and towels; construction begun.

Tenn., Knoxville—Underwear.—Standard Knitting Mills purchased (at \$31,500) land adjoining present plant; will erect buildings for plant with daily output of 600 dozen men's underwear; machinery to include 12,000 spindles, 50 latch needle knitting machines, 200 sewing machines, bleaching, dyeing and drying equipment; yarn-spinning building to be of standard brick and mill construction, costing about \$50,000; install about 450 horse-power steam plant; building plans being prepared; probably award con-

tracts to local builders; contract awarded for 50 revolving flat cards, 50 spinning frames (about 12,000 spindles) and auxiliary machinery for yarn production; other machinery not purchased; Joseph T. Brownlee, general manager.

WATER-WORKS

Ala., Athens.—City issued \$7500 of bonds for water-works and sewer construction. Address The Mayor. (Lately mentioned.)

Ala., Hartselle.—City will vote August 22 (deferred date) on recently-noted bond issue of \$28,000 for construction of water-works and electric-light plant; plans by Xavier A. Kramer, Magnolia, Miss.

Ark., Russellville.—Russellville Water & Light Co., with offices at Pine Bluff, Ark., is considering construction of water plant previously noted; probable cost, \$60,000. (See "Machinery Wanted.")

Ark., Ola.—City contemplates granting water-works franchise. Address The Mayor.

Fla., St. Petersburg.—City has postponed recently-mentioned date of election to August 30 for voting on issuance of \$10,000 bonds for water-works. Address The Mayor.

Ga., Atlanta.—City awarded contract at \$28,478 to Nichols Contracting Co., 818 Equitable Bldg., Atlanta, for construction of two coagulating basins, intake tower and overflow tower at water-works; reinforced concrete. (Lately mentioned.)

Ga., Adel.—City will vote August 17 on issuance of \$7500 of bonds for improvements and extension to water-works system. Address The Mayor.

Ga., Lafayette.—City awarded contract to J. B. McCrary & Co., Atlanta, Ga., for construction of water and light plant. (Lately mentioned.)

Ky., Harlan.—Commercial Club is interested in establishment of water-works.

Md., Baltimore.—Alfred M. Quirk, Water Engineer, City Hall, is having plans prepared for construction of proposed dam at Loch Raven; plans are also being prepared for proposed filtration plant at Montebello; cost of filtration plant, \$1,500,000.

Mo., Kansas City.—City voted bonds for water-works, \$1,000,000; city market, \$50,000; fire department, \$100,000; improvement to Missouri River front, \$75,000; workhouses, city prisons and houses of correction, \$50,000; paving-repair plants, \$50,000; incinerating plants, \$100,000; tuberculosis hospitals, \$50,000; severs, \$300,000; 12th St. trafficway, \$475,000; bridges, \$200,000; isolation hospital, \$75,000; Darlus Brown, Mayor. (Previously mentioned.)

N. C., Roxboro.—City has voted issuance of bonds for water-works and street and sidewalk improvements; will expend \$2500 on water-works; 1000 feet pipe extension; bids to be opened September 1; N. Lunsford, Mayor. (See "Machinery Wanted.")

Okl., Hobart.—City will vote August 2 on issuance of \$50,000 of bonds for improvements to water-works; plans call for construction of dam and eight-inch main to Big Elk Creek and installation of electric motor to pump water to settling basin. Address The Mayor.

S. C., Anderson.—Anderson Water, Light & Power Co. will install water system; construct station on Bailey's Creek to pump water to 600,000-gallon coagulating basin; first installation will supply 500,000 gallons daily, together with present supply, making 570,000 gallons; company plans to install system with ultimate capacity of 6,000,000 gallons daily; H. S. Jaudon, Savannah, Ga., is in charge of construction; estimated cost \$10,000.

Tenn., Abilene.—City has voted issuance of \$7000 of bonds for improvements to water-works system. Address The Mayor. (Lately mentioned.)

Tenn., Brownsville.—City will vote August 2 on issuance of \$15,000 of bonds for improvements to water-works and electric-light plant. Address The Mayor. (Lately mentioned.)

Tex., Harlingen.—City has voted issuance of \$30,000 of bonds for water-works and street improvements. Address The Mayor.

Tex., Quanah.—City approved proposition of D. E. Decker and T. Rogers for system of continuous shallow wells as improvement to water supply. Address The Mayor. (Lately mentioned.)

Tex., Roanoke.—A. B. Horton, Argyle, Tex., has purchased Roanoke water-works and will install new machinery, etc.

Tex., Winters.—City contemplates voting on issuance of \$20,000 of bonds for water-works. Address The Mayor.

W. Va., Belington.—F. P. Reese will, it is rumored, organize company capitalized at \$4,000,000 to construct dam across Buckhannon River, backing water a distance of 15

miles, to furnish water supply for various cities.

W. Va., Romney.—City contemplates voting on issuance of \$30,000 bonds for water-works system. Address The Mayor. (Lately mentioned.)

W. Va., Keyser.—City has voted issuance of \$30,000 of bonds for water-works improvements; will construct 30,000,000-gallon reservoir, etc. Address The Mayor. (Lately mentioned.)

WOODWORKING PLANTS

Ark., Helena.—Chair.—Alton-Ramsey Manufacturing Co., Grand Rapids, Mich., will, it is reported, establish chair manufactory.

Ky., Paducah—Wheels.—Mutual Wheel Co., Moline, Ill., will establish plant; erect main building 40x140 feet; frame; brick boiler-room; cost \$10,000; Geo. Bartholomew, local manager.

Ga., Cordele—Flooring.—Patent Rift Flooring Co. organized with \$100,000 capital stock by John W. Piver, W. A. Thompson and W. F. Hall.

La., Algiers—Veneers.—Martin S. Mahoney, Peter Vezien, J. Bodenger and others are interested in incorporation of company with \$50,000 capital stock to establish plant for manufacturing furniture veneers.

Miss., Columbus—Wagons, etc.—Southern Manufacturing Co. incorporated with \$75,000 capital stock by W. W. Craig, Columbus, Miss.; Thomas F. Lundgren, Marion, O., and John F. Elder, Columbus, O.

Tenn., Memphis—Wagons, etc.—A. B. Fisher, New Madrid, Mo., will, it is reported, establish plant for manufacturing hardwood lumber, wagons, buggies, etc.

Okla., Oklahoma City.—Ancient Free and Accepted Masons having plans prepared by Ernest Bailey, Oklahoma City, for remodeling White Temple for lodge purposes.

S. C., Columbia.—Young Men's Christian Association is having plans prepared by Leo L. Oberwarth of Frankfort for proposed building; cost \$35,000 to \$40,000.

Tex., Rogers.—Independent Order of Odd Fellows will erect two-story brick lodge building; 40x120 feet.

Tex., Waco.—J. F. Brinkerhoff, chairman of committee, states plans for proposed Masonic Hall and store building are not fully decided; brick structure; 75x100 feet; cost \$30,000; architects, Scott & Pearson, Waco.

BURNED

Ala., Selma.—Irwin Cade's cotton gin; loss \$3500.

Ala., Sheffield.—Meyers' Opera-house; Krelzman & Off's building; loss \$45,000.

Ky., Jeffersontown.—Wheeler & Davis will probably erect flour mill to replace burned plant.

La., De Ridder.—James Durham's store, loss \$20,000; Phoenix Drug Co.'s store, loss \$15,000; Cumberland Telephone Co.'s exchange.

Miss., Tylertown.—O. F. Cassiory's sawmill; loss \$5000.

N. C., Troutman.—J. H. Truelove's buggy and blacksmith shop; loss \$4000.

Tenn., Stanton.—Residence of J. S. Rawlins, president of Tri-State Medical Association; loss \$8000.

Tex., Paris.—G. C. Clem's gin and grist mill at Ozark; loss \$4000.

Tex., Pilot Point.—American Cotton Co.'s cotton gin; loss \$6000.

W. Va., Kingwood.—Tri-State Lumber Co.'s plant; loss \$10,000.

W. Va., Martinsburg—Buggies.—Stewart Vehicle Co. awarded contract to W. H. Frankenberg, 322 West Race St., Martinsburg, for erection of three-story brick addition; cost \$5000.

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Miss., Meridian—Stable.—C. B. Team Mule Co. has purchased site cornered 5th St. and Twentieth Ave. and will erect stable.

Okl., Oklahoma City—Stadium.—Oklahoma City Baseball Club will erect stadium; seating capacity, 10,000; cost \$75,000.

Va., Harrisonburg—Hospital.—Rockingham Memorial Hospital trustees have accepted plans by Carneal & Johnston, Richmond, Va., for erection of proposed memorial hospital; stone and brick; 42x90 feet; vacuum heat; electric lighting; electric passenger elevator; cost about \$25,000; date of opening bids not set.

W. Va., Wheeling—Lockhouses, etc.—U. S. Engineer Office, Wheeling, W. Va. Sealed proposals for erecting two lockhouses, three buildings for offices and warerooms and four outbuildings on Little Kanawha River will be received until August 23 and then publicly opened; information on application to this office or to U. S. Engineer office, Parkersburg, W. Va.; F. W. Altstaetter, Captain, Engineers.

RAILWAY STATIONS

Ala., Avondale, Ind. Sta., Birmingham.—Alabama Great Southern Railway, J. R. Murray Superintendent Bridges and Buildings, Tuscaloosa, Ala., has purchased site and will erect freight depot; brick; two stories; 30x70 feet; cost \$15,000.

Ala., Bessemer.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va.; Central of Georgia Railroad, C. K. Lawrence, chief engineer, Savannah, Ga.; Illinois Central Railway, A. S. Baldwin, chief engineer, Chicago, Ill.; St. Louis & San Francisco Railroad, M. C. Byers, chief engineer, St. Louis, Mo., have plans for erection of union depot; 100x30 feet.

Ga., Waynesboro.—Brinson Railway, G. S. Burchell, chief engineer, Springfield, Ga., has purchased site and will erect brick depot.

Okl., Muskogee.—Missouri, Kansas & Texas Railroad, S. B. Fisher, chief engineer, St. Louis, Mo., has awarded contract for erection of freight depot; 60x50 feet; cost \$20,000.

S. C., Camden.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., and other railroads will erect passenger station; plans are being prepared.

Tex., Paris.—St. Louis & San Francisco Railroad, M. C. Byers, chief engineer, St. Louis, Mo., has awarded contract at \$32,600 for erection of proposed union depot, exclusive of plumbing, furnishings, platforms.

SCHOOLS

Ala., Lineville.—Board of Education has plans by E. and E. A. Zobell, Roanoke, Ala., for proposed Lineville college; two stories; nine rooms and auditorium; cost \$13,000.

Ark., Conway.—Sealed bids will be received by B. W. Torreyson, secretary, until August 13 for erection of south and central wings of three-story-and-basement brick, slate roof, dormitory building on campus of the Arkansas State Normal School; bids will be received in two forms: First, for entire completion of south and central wings, omitting north wing in its entirety, placing north porch and wall and north entrance doorways on north line of central wing; second, to enclose south and central wing as above, finishing all first floor and a portion of basement; board reserves the option to except the first proposition within one year from date of signing contract; plans at office of president of school at Conway and at office of Chas. L. Thompson, architect, Little Rock, Ark.; certified check for \$500, payable to B. W. Torreyson, secretary. (Recently mentioned.)

Ark., El Dorado.—W. J. Pinson, secretary El Dorado Special School District, will receive bids until August 6 for erection of two-story brick school; certified check for \$500, payable to Mr. Pinson; plans and specifications at office of Theo. M. Sanders, architect, 709-10 Southern Trust Bldg., Little Rock, Ark.; or Mr. Pinson as above, or may be had on deposit of \$10.

Ark., Jonesboro.—Directors of First District Agricultural School will receive bids until August 20, when they will be opened at Gleason Hotel, Little Rock, Ark., for erection of school; certified check for \$500, payable to O. N. Hammatt, secretary, Paragould, Ark.; plans and specifications on file at office of R. P. Morrison, architect, 17 People's Bldg. and at Security Bank & Trust Co. Bldg., Paragould, Ark. (Previously noted.)

Ark., Morrilton.—Morrilton Special District School Board will receive bids until July 28 for erection of school; certified check for \$250; plans and specifications at office of R. L. Greer, secretary of building committee, and Frank M. Blaisdell, architect, Fort Smith, Ark.; fireproof structure; 96x100 feet; steam heat; cost \$20,000.

Ark., Texarkana.—City will erect high-school building; Geo. W. Reid, superintendent of public schools.

Ark., Warren.—Warren Special School District will expend \$30,000 on erection of school building recently noted; three stories; 20 rooms and auditorium; furnace to cost \$5000; plans by Hewitt & Emerson, Peoria, Ill.; bids opened August 20. Address W. S. Hobbs.

Ga., Toccoa.—City will vote August 9 on \$7,000 bond issue to erect school; John W. Owen, Mayor. (Previously noted.)

Ky., Cadiz.—Cadiz graded school district will vote August 6 on \$12,000 bond issue to erect school; estimated cost \$25,000. Address district school trustees.

Ky., Hyden.—Hyden School District will vote July 30 on \$10,000 bond issue to erect school. Address District School Trustees.

La., Bunkie.—Avoyelles Parish Police Jury will consolidate Eola, Haasville, Bayou Claire and Bunkie school districts and erect \$15,000 brick school at Bunkie.

La., Cottonport.—City has plans by Favrot & Livaudais, New Orleans, for proposed high-school building; nine classrooms, auditorium, library and principal's room; cost \$10,000; will open bids August 10; plans and specifications from architect.

La., St. Martinsville.—Bids will be received until August 9 for erection of two-story-and-basement brick school; plans and specifications at office of Favrot & Livaudais, Ltd., architects, 839 Gravier St., New Orleans, La.

Md., Gaithersburg.—Montgomery County Commissioners, Rockville, Md., will erect addition to High School.

Mo., Webb City.—City will open bids August 2 for erection of proposed high-school building; separate bids for three grades of material, namely, all Carthage stone; Carthage stone for first story with remainder of brick; brick with Carthage-stone trimmings; cost \$30,000. Address The Mayor.

Okla., Jones City.—City voted \$5000 bond issue to erect school. Address The Mayor.

Okla., Bigheart.—City reported to have plans by A. H. Mott for stone and brick schoolhouse; cost \$20,000. Address The Mayor.

Okla., Hallett.—City reported to have plans by A. H. Mott for four-room brick schoolhouse to cost \$6000. Address The Mayor.

Okla., Woodward.—City will erect \$60,000 high-school building. Address The Mayor.

Tenn., Johnson City.—State Board of Education, Nashville, Tenn., has plans by Baumann Bros., Knoxville, Tenn., for proposed East Tennessee State Normal School; main building 260x112 feet; "E" shaped; entrance through marble steps 37 feet long; main corridor entire length of building 14 feet wide; auditorium to seat 866 students, with platform 18x25 feet; maple floors; walls and ceilings of patent cement plaster; electric wiring in conduits; Warren Webster system direct-indirect steam heating; steam from central heating plant, consisting of two 100-horse-power boilers installed in building especially constructed for same, having ample space for vacuum pumps, necessary valves and fuelroom; 100-foot brick stack for smoke; building provided with secret roof covered with gravel; red pressed brick; Tennessee marble trimmings; women's dormitory, 32x222 feet 10 inches; walls and partition of hard brick; reinforced floors, ceilings and roof; 80 rooms; hot and cold water in each room; cement floor in basement; three stories; brick; marble trimmings; cost \$180,000; is having plans prepared by same architect for \$14,000 10-room brick residence for president; contemplates erection of men's dormitory later. (Previously noted.)

Tenn., Maryville.—Alvin E. Cruze, secretary-treasurer building committee, will receive bids until August 1 for erection of two schools; certified check for 5 per cent. amount of bid; plans and specifications at office of Theo. M. Sanders, architect, 709-10 Southern Trust Bldg., Little Rock, Ark.; or Mr. Pinson as above, or may be had on deposit of \$10.

Ark., Jonesboro.—Directors of First District Agricultural School will receive bids until August 20, when they will be opened at Gleason Hotel, Little Rock, Ark., for erection of school; certified check for \$500, payable to O. N. Hammatt, secretary, Paragould, Ark.; plans and specifications on file at office of R. P. Morrison, architect, 17 People's Bldg. and at Security Bank & Trust Co. Bldg., Paragould, Ark. (Previously noted.)

Ark., Morrilton.—Morrilton Special District School Board will receive bids until July 28 for erection of school; certified check for \$250; plans and specifications at office of R. L. Greer, secretary of building committee, and Frank M. Blaisdell, architect, Fort Smith, Ark.; fireproof structure; 96x100 feet; steam heat; cost \$20,000.

Tenn., Nashville.—University of Nashville received bids for erection of \$100,000 hospital building recently noted; no bids accepted; construction postponed for present; fireproof structure; 124x60 feet; steam heat; electric lighting; plans by Meyer J. Sturm, 54 La Salle St., Chicago, Ill.

Tenn., Nashville.—Davidson County Board of Education, J. Taylor Stratton, president, will rebuild Jere Baxter school; cost \$3000; will also erect school near Cumberland Park.

Tenn., Nashville.—Methodist Training School will erect two-story addition to school and office building; cost \$3000.

Tex., Dallas.—Board of Education received bids for erection of new Oak Cliff School, but practically decided to rebuild burned structure, using standing walls in construc-

tion; is having plans prepared by Gill & Nicol, Dallas. (Recently mentioned.)

Tex., Golliad.—John Cole is arranging for erection of Catholic school and convent; cost \$5000.

Tex., Germantown.—Montgomery County Commissioners, Rockville, Md., will erect school at Damascus and at Germantown; cost \$10,000.

Tex., Flatonia.—City contemplates issuing \$12,000 of bonds to erect school. Address The Mayor.

Tex., Houston.—W. Waldo of Houston has been commissioned to prepare plans, specifications and estimates for construction of sanitary sewers, drainage system, roads, etc. for Wm. M. Rice Institute, Edgar Odell Lovett, 1110 Scanlan Bldg., president. Mr. Waldo will also carry out landscape feature, in association with Cram, Goodhue & Ferguson of Boston and New York, who were recently noted as architects for building. (Contract for erection of administration building lately noted let to Wm. Miller & Sons Co., Pittsburgh, Pa., at \$319,478.)

Tex., Lufkin.—Lufkin Independent School District voted bonds to erect school; W. C. Trout, president.

Tex., Navasota.—City voted \$20,000 bond issue to erect school; plans and estimates to be advertised when bonds are placed. Address The Mayor. (Previously noted.)

Tex., Penn City.—Penn City District School Trustees awarded contract at \$7329 to Cook & Ettie, Houston, Tex., for erection of school. (Previously noted.)

Tex., Ringgold.—Bids will be received until August 10 for erection of school; certified check for 4 per cent. of bid; plans and specifications at office of Sparger & Peters, architects, Bonham, Tex., and at Ringgold State Bank; E. E. Carlton, president School Board.

Va., Tanners Creek.—Norfolk County Commissioners will award contract to Charles F. Harper of Norfolk, Va., for erection of proposed high-school building; eight rooms; cost \$19,600; plans by Lee & Diehl, Norfolk. (Previously mentioned.)

STORES

Ala., Anniston.—R. E. Garner will remodel store buildings to be occupied by S. H. Kress Company, main office, 296 Broadway, New York; remove dividing wall, remodel front; install two entrances and four display windows; cost \$5000; Mr. Wilson of S. H. Kress Company is supervising architect.

Ala., Troy.—W. R. Sellers will erect brick store building; 55 feet square.

Ark., Altheimer.—W. C. Crittenden, J. P. Walt & Bro. and L. M. Quattlebaum will receive bids until July 30 for erection of three brick buildings; plans and specifications at office of Geo. M. Bonnell, 55½ Main St., Little Rock, Ark.; certified check for \$200.

Ark., Argenta—Laske Bros., Little Rock, Ark., will erect hotel and store building after plans by H. J. Harker, 702 State National Bank Bldg., Little Rock, Ark. (See "Hotels.")

Ark., Little Rock.—William Hoffman will erect store and hotel building. (See "Hotels.")

Ark., Texarkana.—The Criterion is reported to build store front at cost of about \$7800; plans by Singleton & Moore, Texarkana, Ark.; W. W. Huff, probable contractor.

Ark., Texarkana.—Bryant & Brown will erect business building; three stories and basement; freight and passenger elevators; cost \$20,000.

Fla., Clearwater.—H. E. Tooke will erect two-story 50x75 foot concrete building for stores and offices; ordinary construction; front of white cement blocks and cast concrete; plans by Bonnivell & Son, St. Petersburg, Fla.; bids opened about August 5.

Fla., Clearwater.—C. Lowery and E. Turner open bids about August 1 for erection of store and apartment building; two stories; brick; 50x75 feet; cost about \$7500; plans by Bonnivell & Son, St. Petersburg, Fla. (See "Machinery Wanted.")

Fla., Tarpon Springs.—W. C. Henry and Chas. Lee are erecting proposed \$5000 building; to contain 21x50-foot storeroom and 25x50-foot postoffice; brick; one story; paroid roof; erection by W. C. Henry, St. Petersburg, Fla.

Fla., Maysville.—Joseph Caproni purchased building, will erect two-story wing and rebuild portion of rear wall to extend store-rooms to new structure.

Md., Baltimore.—Joel Gutman & Co., 112-12 North Eutaw St., have plans by Louis Levi, American Bldg., Baltimore, for improvements to store; will alter first floor front and remodel interior; contractors estimating are Henry Smith & Sons, 116 South

Regester St.; John Hiltz & Son, 3 Clay St.; T. L. Jones & Son, 419 West Saratoga St., all of Baltimore.

Md., Baltimore.—Albert A. Brager, Eutaw and Saratoga Sts., has plans by C. M. Robinson, 324 North Charles St., Baltimore, for addition to store; four stories; brick; stone trimmings; 44x100 feet; cost \$25,000; contractors estimating are D. M. Andrews Company, Mt. Vernon Ave., and 26th St.; Monmonier & Sorrell, 308 Laurens St.; W. F. Beavin & Co.; W. E. Burnham, Builders' Exchange; J. Henry Miller, 108 Dover St.; Engineering Contracting Co., 207 American Bldg.; Geo. Bunnecke & Sons, 35 St. Paul St., all of Baltimore; Painter & Posey, 324 North Charles St., Baltimore, engineers in charge. (Recently mentioned.)

Md., Baltimore.—Stafford & Bro., 1702-1704 West Pratt St., will rebuild structure recently collapsed; loss \$10,000.

Md., Baltimore.—Besche Bros., 101 Light St., had plans prepared by Henry J. Tinley, 31½ N. Charles St., Baltimore, for building recently noted to be rebuilt; size, 29 feet 6 inches by 90 feet 7 inches; steam heat; electric lighting; cost \$12,000; contractors estimating are J. Elmer Stanfield Company, 412 East 27th St.; James F. Farley, 43 Franklin Bldg., and C. C. Watts, 113 West Hamilton St., all of Baltimore.

N. C., Winston-Salem.—Mrs. M. A. Masten is having plans prepared by J. S. Zimmerman, Winston-Salem, for business building; three and four stories; brick; metal roof; elevator; front and sides of pressed brick; plate-glass windows; 90x21.4 feet; stores on first floor; offices above.

Tenn., Nashville.—Goodlett Realty Co. will erect four-story business building.

Tex., Dallas.—Easterwood, Fielder & Bolanz have plans by C. D. Hill & Co., Dallas, for business building; three stories and basement; 51x90 feet.

Tex., El Paso.—Calisher Dry Goods Co. has plans by H. C. Trost, El Paso, for store; seven stories.

Tex., Lockhart.—Ed Masur will erect brick business building.

Tex., Rogers.—Mr. A. B. Ater will erect brick business building.

Tex., Taylor.—L. H. Goldstein of Waco, Tex., is having plans prepared by Henry Struve, Taylor, for store building; two stories; brick; 80x56 feet.

Va., Lynchburg.—Miss Dora Ford will erect brick building; tin roof; cost \$11,700.

Va., Lynchburg.—Drs. Clark and Hubbard will erect business building; brick; metal roof; cost \$15,000.

THEATERS

Fla., Zephyrhill (not a postoffice).—Edward A. Nolan, 216 Curry Bldg., Tampa, Fla., is preparing plans for theater and Masonic Temple building. (See "Association and Fraternal.")

La., Lake Arthur.—Lake Arthur Club organized; J. B. Ferguson, president; Desire Hebert, vice-president; U. G. Smith, secretary; W. S. Streeter, treasurer; will erect auditorium 40x100 feet; cost \$7000.

Md., Baltimore.—David Newman, 1629 Madison Ave., is having plans prepared by J. E. Lafferty, II East Pleasant St., Baltimore, for moving-picture theater at 1105-07 North Broadway; ornamental metal front; one story; estimated cost \$6000; contractors estimating are M. C. Davis, 5 Hopkins Pl.; W. H. Porter & Son, 507-509 Forrest St.; James F. Farley, Franklin Bldg.; Rodgers & McCall, 21 East Saratoga St., all of Baltimore.

Md., Baltimore.—Edwin A. Reikin of New York leased Princess Theater on Baltimore St., between Central Ave. and Alsop St., and will expend \$3000 for improvements.

Tex., Port Arthur.—H. C. Sterns will erect theater; one story; brick; 30-foot stage.

WAREHOUSES

Fla., St. Augustine.—Amos W. Corbett will erect warehouse on Ribera St.; constructed in two parts on north and south side on inland water line dock over San Sebastian River; 100x30 feet.

Ga., Savannah.—Brampton Warehousing & Development Co. incorporated with \$100,000 capital stock by Edward W. Bell, W. F. Train, Alfred Simkins and R. M. Hitch; to develop Brampton plantation by erecting cotton warehouses, docks, etc.

Md., Baltimore.—International Ha vester Co., Chicago, Ill., has plans by W. G. Offenbach, Chicago, for erection of warehouse on Dickson St., between Mosher and Lafayette Ave.; cost \$75,000; bids invited from following contractors: J. Henry Miller, 106 Dover St.; Noel Construction Co., United States

Fidelity & Guaranty Bldg.; J. J. Walsh & Son, 1533 Maryland Ave.; W. E. Burnham, 2 Builders' Exchange Bldg.; Geo. Bunnecke & Son, 305 St. Paul St., all of Baltimore. (Lately mentioned.)

Md., Baltimore.—Chas. J. Bonaparte, 216 St. Paul St., will not erect warehouse; is contemplating improvements on lot at No. 6 South Calvert St. (Recent report incorrect.)

Mo., Kansas City.—C. D. Gilchrist, 3428 South Benton St., will erect building recently noted; ordinary construction; size 50x125 feet; cost \$15,000; plans and construction by Mr. Gilchrist. (See "Machinery Wanted.")

N. C., Wilmington.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., will erect "warehouse D," to be occupied by Pocomoke Guano Co.; 90x390 feet; company also contemplates erecting "warehouse E;" V. Sykes, engineer, Raleigh, N. C., in charge of construction.

S. C., Greenville.—Charleston & Western Carolina Railway, R. A. Bland, traffic manager, Wilmington, N. C., awarded contract to Gallivan Building Co., Greenville, for erection of five warehouses; three stories; brick; equipped with elevators, automatic sprinklers, etc.; cost \$70,000.

Tenn., Bristol.—Hamilton-Bacon-Hamilton Company will erect concrete-block building to replace warehouse recently reported burned; three stories; 190x50 feet.

Tex., Taylor.—Farmers' Union Warehouse Co. will rebuild burned cotton warehouse.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

W. Va., Keyser.—J. R. Bane awarded contract to Henry Baker, Keyser, for erection of store and apartment building; two stories; brick; first floor, stores; upper floor, apartment.

ASSOCIATION AND FRATERNAL

Ala., Huntsville.—Young Men's Christian Association awarded contract at \$41,000 to Glidewell Bros. of Huntsville for erection of proposed building.

Ga., Waycross.—Young Men's Christian Association awarded contract to G. L. Croft, Waycross, for erection of proposed building; cost \$76,000.

Va., Crewe.—T. W. Kirkbride, 16½ Campbell Ave., Roanoke, Va., is proceeding with construction of Railroad Young Men's Christian Association building; cost \$30,000.

BANK AND OFFICE BUILDINGS

Ala., Oneonta.—Oneonta Trust & Banking Co. awarded contract to William Christopher, Gadsden, Ala., for erection of office building at First Ave. and 2d St.; two stories; pressed brick; cost \$6000.

Fla., Tarpon Springs.—W. C. Henry, contractor, St. Petersburg, Fla., is proceeding with erection of previously-noted \$10,000 bank and office building for Sponge Exchange Bank; two stories; brick; tin roof; 25x100 feet; plans by Bonniwell & Son, St. Petersburg.

La., Franklinton.—J. S. Brock, Jr., awarded contract to Burkes Bros. & Fleming, Hattiesburg, Miss., for erection of store and office building. (See "Stores.")

Miss., Batesville.—T. Thomas, Batesville, closed contract for bank building. (See "Stores.")

Okl., Oklahoma City.—Southwest Mortgage Co., Wm. L. Norton, president, has awarded contract to Campbell & O'Keefe, Oklahoma City, for erection of office building corner Main and Harvey Sts.; 16 stories; 50x140 feet; steel and Carthage stone; fireproof; cost \$600,000. (Lately mentioned.)

Tex., Waco.—Amarillo Life Insurance Co., Artemus Roberts, president, awarded contract to Westlake Construction Co., St. Louis, Mo., for erection of office building; 20 stories; 50x105 feet; fireproof; cost \$500,000; plans by Sanguinet & Staats, Dallas, Tex. (Previously mentioned.)

Va., Shawsville.—Bank of Shawsville awarded contract to M. C. Miller, Christiansburg, Va., for erection of two-story brick bank building of colonial design; tin roof; vapor heat; cost \$4000; plans by H. M. Miller, Roanoke, Va.

W. Va., Martinsburg.—Old National Bank awarded contract to W. H. Frankenberg, 322 West Race St., Martinsburg, for improvements to structure; cost \$5000. (Recently noted.)

CHURCHES

Ga., Cordele.—Methodist Episcopal Church, Rev. M. A. Morgan, pastor, awarded contract

to Little & Phillips for erection of church edifice corner 5th St. and Twelfth Ave.; cost \$40,000; construction begun. (Lately mentioned.)

Md., Roland Park.—Roland Park Presbyterian Church has plans by John Freund, Jr., 210 East Lexington St., Baltimore, for alterations and improvements to church edifice; B. F. Bennett Building Co., 123 South Howard St., Baltimore, has contract.

CITY AND COUNTY

Ala., Geneva—Jail.—Geneva county awarded contract to Dobson & McKinnon, Geneva, for erection of jail to cost \$19,744.

Ga., Atlanta.—Sanitarium.—City awarded contract at \$7960 to F. P. Helfner, Atlanta, for erection of main building for tuberculosis sanitarium on Battle Hill property; plans by W. T. Downing, 525 Grant Bldg., Atlanta; contracts for elevator, lighting, heating and plumbing to be let separately. (Recently mentioned.)

Tex., Austin.—Fire Station.—City awarded contract at \$9797 to Fisher & Lamby, Austin, for erection of fire station recently noted; size 46x7 feet; electric lighting; plans by C. H. Page & Bro., Austin, Tex.

DWELLINGS

Ark., Little Rock.—D. Ensley awarded contract to H. A. Richey, Little Rock, for erection of two-story frame dwelling; cost \$4800.

Fla., Jacksonville.—W. R. Burt, 34 East 4th St., awarded contract to N. L. Nelson, Jacksonville, for erection of dwelling recently mentioned; buff brick; veneer; tile roof; two chimneys; five fireplaces; electric lighting; cost \$8000; barns, fences and sidewalk to be constructed at \$2000 additional cost.

Md., Baltimore.—Bartlett B. James, Garrison Ave. near Liberty Heights Ave., awarded contract to L. J. Brown, Pimlico Blvd., near Belvidere Ave., Baltimore, for erection of residence on Park Heights Ave.; two and a half stories; concrete foundation; slate roof; 30x40 feet; ornamental porch front; cost \$8000; plans by John R. Forsythe, 232 Paul St., Baltimore.

Md., Baltimore.—J. B. Thomas of Thomas & Thompson, Baltimore and Light Sts., has plans by Thomas C. Kennedy, 211 North Calvert St., Baltimore, for residence at Charles-Street Blvd. and 33d St.; 38x71 feet 9 inches; ordinary brick; cost \$17,000; hot-water heat; electric lighting; construction by German Land Improvement Co., 202 Law Bldg., Baltimore.

Md., Baltimore.—John J. Hurst, president of Cityco Realty Co., 1201 Calvert Bldg., awarded contract to William Batton & Son, 2 East Montgomery St., Baltimore, for erection of two cottages 26x30 feet and bungalow 36x26 feet at Park Hill; cost \$12,000.

Md., Baltimore.—Walter M. Gieske, 906 Equitable Bldg., awarded contract to David E. Evans & Co., 11 East Lexington St., Baltimore, for erection of cottage on Edmondson Ave. and North Bend La.; cost \$9000.

Md., Baltimore.—J. T. Donohue, 1898 Thames St., awarded contract to M. R. Stone, 2238 East Hoffman St., for erection of 34 two-story brick dwellings recently noted; cost \$35,000; plans by contractor.

Mo., Marshall.—E. R. Page, Marshall, has contract for erection of \$7000 frame residence; construction begun.

N. C., Winston-Salem.—R. O. Apple awarded contract to D. J. Hendricks, Winston-Salem, for erection of dwelling; two stories; 12 rooms; frame; single roof; electric lights; cost \$4000.

N. C., Winston-Salem.—T. K. Renfro awarded contract to Leight Bros. of Walkertown, N. C., for erection of \$10,000 residence.

N. C., Winston-Salem.—A. F. Moses awarded contract to W. G. Melcher, Winston-Salem, for erection of residence; two stories; 10 rooms; cost \$5000.

Tenn., Knoxville.—First Presbyterian Church awarded contract to Stal Bros., Knoxville, for erection of proposed manse; two stories; brick veneered; cost \$4500; plans by Gredig & Lynn, Knoxville.

Tenn., Nashville.—W. W. Banks, 708 Gay St., awarded contract to Moses McKissack & Co., Nashville, for erection of dwelling recently mentioned; two-story brick, with metal-shingle roof; size 30x60 feet; hot-air heat; gas and electric lighting; cost \$3500; plans by Moses McKissack, 517 Second Ave., N.

Tenn., Nashville.—Mrs. Emma W. Flite had plans by and awarded contract to C. C. Carter for erection of building recently mentioned; 10 rooms; brick and stucco; furnaces; gas and electric lighting; cost \$3000. (Previously noted as L. B. Flite.)

Md., Baltimore.—Board of Awards awarded contract at \$19,730 to R. B. Mason, 210 East Lexington St., Baltimore, for remodeling main building (of Blind Asylum) for Polytechnic Institute; plans by Baldwin & Pennington,

Tex., Ballinger.—C. H. Willingham awarded contract for erection of \$10,000 residence.

Tex., Bay City.—Fred S. Robbins awarded contract to Mr. Hatchett, Bay City, for erection of residence; concrete foundation; cost \$10,000.

Va., Lynchburg.—C. N. Hancock has plans by Heard & Cardwell, 204 First National Bank Bldg., Lynchburg, for 40x57-foot hollow tile and stucco residence; redwood shingle roof; vapor heat; electric and gas lighting; cost \$4500; contractor, C. W. Hancock & Sons, Lynchburg.

Va., Richmond.—Ashby B. Pyle will erect two-story brick tenement dwelling; cost \$6500; contract awarded to Davis Bros., West Main St., Richmond, Va.

W. Va., Gary.—T. W. Kirkbride, 16½ Campbell Ave., Roanoke, Va., has commenced construction of proposed miners' house for U. S. Coal & Coke Co.; cost \$35,000.

W. Va., Keyser.—Charles Alkire awarded contract to H. G. Steorts, Keyser, for erection of dwelling.

GOVERNMENT AND STATE

Tex., Fort Sam Houston—Official Quarters, etc.—H. D. Rheiner & Bro., San Antonio, Tex., have been awarded contract at \$65,000 for previously-noted buildings; P. W. Guiney, constructing quartermaster.

HOTELS

Fla., Tampa.—Robert Mugge awarded contract to Davidson & Adams, Tampa, to erect three-story brick building for hotel and restaurant and one-story annex; larger building 45x100 feet; smaller 45x50 feet; fronts of pressed brick; remainder of Florida brick; cost \$18,000.

Tex., Houston.—Fred A. Jones Building Co. of Houston, Tex.; New Orleans, La., and Praetorian Building, Dallas, Tex. (Recently noted receiving contract for erection of Bender Hotel), advises as follows: "Foundations in and steel contract let; no other sub-contracts let; want figures on all except mechanical lines, which will be let separately by owner; 10 stories; \$500,000 project. (See "Machinery Wanted.")

Tex., San Jose.—H. L. Scott & Co., San Antonio, Tex., states their contract with Terrell Well Co. calls for erection of 250-room \$390,000 hotel at San Jose; also large bathhouse. (Previously noted. See "Miscellaneous Enterprises.")

Tex., Leonard.—Manton College awarded contract for erection of dormitory to accommodate 50 to 60 girls; cost \$5000.

Tex., Marshall.—Bishop College awarded contract to William Pugh & Co. of Gilmer, Tex., for erection of boys' dormitory; cost, exclusive of heating, plumbing, etc., \$33,000; additional cost, \$11,000; Thurber brick construction.

STORES

Ark., Little Rock.—Mrs. L. Baer awarded contract to Fred Gougeon, Little Rock, to erect two-story brick building; cost \$7000.

La., Franklinton.—J. S. Brock, Jr., awarded contract to Burkes Bros. & Fleming, Hattiesburg, Miss., for erection of proposed two-story brick store and office building; pressed-brick front; cost \$6000.

La., Morgan City.—Jake J. Goldman awarded contract to C. D. Stewart, Baton Rouge, La., for erection of business building; glass front; cost \$14,000.

Miss., Batesville.—T. Thomas, Batesville, has closed contract for five one-story stores and a bank building; cost \$20,000; masonry work by T. W. Beall Company, Como.

Mo., Marshall.—E. R. Page, Marshall, has contracts for erection of two brick store buildings; cost \$12,000; excavation completed.

Tenn., Ripley.—W. R. Miller awarded contract to S. P. Pugh, Ripley, for erection of two-story brick business building.

Tex., Hearne.—I. I. Rosensteln awarded contract for erection of business building; brick; cost \$6500.

Tex., Texarkana.—L. Longinotti awarded contract to J. D. Johnson, Texarkana, Ark., to erect two-story brick store and lodge building; cost \$5000; plans by H. R. Carter. (Mr. Longinotti previously noted to rebuild burned structure.)

W. Va., Keyser.—J. R. Bane awarded contract to Henry Baker, Keyser, for erection of store and apartment building. (See "Apartment-houses.")

THEATERS

Ark., Little Rock.—J. G. Higgins and Frank J. Head, both of Hot Springs, Ark., awarded contract to Stewart-McGehee Construction Co., Little Rock, for remodeling Capital Theater; cost \$15,000; plans by George Kennerly of St. Louis, Mo. (Recently mentioned.)

WAREHOUSES

Ga., Atlanta.—Florence Investment Co. had plans prepared by and awarded contract to Padgett & Son, Candler Bldg., Atlanta, for erection of warehouse and light manufacturing building; mill construction; five stories;

33x54 feet; brick, stone and concrete; far and gravel roof; electric lighting; electric freight elevator; cost \$12,000.

W. Va., Martinsburg.—W. H. Frankenberg, contractor, 322 West Race St., Martinsburg, has commenced construction of proposed warehouse for Kilbourn Knitting Machine Co.; cost \$20,000.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—An official of the Central of Georgia Railway denies the press report that it is contemplated to double-track its line into Birmingham.

Ala., Birmingham.—The Central of Georgia Railway has let contract to J. W. Wright, Jr., of Union Springs, Ala., to build a three-mile spur through rough country from the Henry Eilen branch to coal mines. C. K. Lawrence of Savannah, Ga., is chief engineer.

Ala., Cullman.—The Cullman Coal & Coke Co. of Cullman is inviting bids to complete construction on its railroad, including sub-grade for 18 miles, besides 24 trestles. More than 100,000 cubic yards of earth and rock will have to be moved.

Ala., Talladega.—The Talladega Construction Co., G. A. Mattison, president, has, according to a dispatch, been awarded a contract to fill in trestles on the Bargetown and Springfield division of the Louisville & Nashville Railroad.

Ala., Tuscaloosa.—Woolsey Flinnell, civil engineer, is reported to have completed survey for the proposed Tuscaloosa Mineral Railroad from Tuscaloosa to Brookwood, Ala., about 21 miles.

Ark., Hampton.—The Thornton & Alexandria Railroad, which has invited bids for a spur from Newton to Tinsman on the Rock Island, 3½ miles, will, according to a dispatch, begin work immediately.

Ark., McCrory.—A dispatch says that grading has begun on the McCrory, Beedeville & Southeastern Railway at Jelks and will extend via McCrory to Eight Mile. C. Hailey is president; E. L. Hamilton, vice-president and general manager, and R. B. Keating, secretary and treasurer.

Ga., Macon.—The Chamber of Commerce and others are reported interested in a movement to build a railroad from Macon to Elberton, Ga., on the Seaboard Air Line.

Ga., Springfield.—The Brinson Railway Co. has filed a mortgage to secure \$1,000,000 of 5 per cent. bonds for its extension (upon which work is already under way) and other purposes. George M. Brinson is president at Springfield, Ga.

Ky., Yale.—The Licking River Railroad is reported purchased by Dr. J. A. McLey of Atlanta, Ga., and others. It will be converted to standard gauge and extended. F. B. Shaw is general manager at Yale, Ky.

La., Baton Rouge.—An officer of the Illinois Central Railroad at Chicago says that plans have not been made nor authority issued to build terminals at Baton Rouge. This denies a recent press report.

La., Hammond.—An officer of the New Orleans, Natchez & Natchez Railroad, with reference to the announcement that survey has been made for an extension from Kentwood to Baton Rouge, La., writes that he has nothing to report at present.

La., New Orleans.—The Southwestern Traction & Power Co., with headquarters at New Orleans, has published its charter to build and operate interurban railroads or other railways, including street railroads, for operation by any motive power; capital stock \$1,500,000. The charter as published does not give the names of the incorporators, but it is signed by J. M. Quintero, notary public, and witnessed by L. A. Hubert and A. H. Ritter. It was filed for record July 23.

La., New Orleans.—An officer of the Frisco system says that the resumption of work on the terminals at Chalmette has not been decided upon definitely and the company is not ready to make any announcement.

La., Oak Grove.—Frank Janes is building a lumber railroad six miles long from Perry to Janesville, La., including two bridges, one over Tiger Bayou 300 feet and another over Pine Bayou 120 feet. J. C. Ahles is the contractor. The officers are Frank Janes, president; John Janes, vice-president; Mrs. Frank Janes, secretary and treasurer; Geo. Wesley Smith, general manager; S. Taylor Jackson, chief engineer, the latter's address being Pioneer, La.

La., Shreveport.—The Kansas City Southern Railroad has let contract to Arnold & Co. of Chicago for yard and shop improve-

ments at Shreveport, to cost about \$500,000. A. F. Rust is resident engineer at Kansas City, Mo.

Md., Baltimore.—The American Monorail Co. contemplates building a railroad from Baltimore to Washington. E. L. Tunis and Howard H. Tunis of Windsor Hills, near Baltimore, are interested. The latter is quoted as saying that part of the route has been surveyed.

Md., Baltimore.—The Western Maryland Railway has bought about 10 acres of land in the Southern part of Baltimore, on the Patapsco River, and proposes to build yard tracks. H. R. Pratt is chief engineer at Baltimore, Md.

Miss., Newton.—J. A. Kauffman, vice-president and general manager of the J. A. Kauffman Company, Dayton, O., will, according to a dispatch, make survey for the Newton & Northwestern Railroad from Newton to Carthage, Miss., 40 miles.

Miss., McComb.—Charter has been filed by the Summit & McComb Motor Line for an electric railway from Summit to McComb and Godbeay Wells, six miles; capital \$40,000. Incorporators are C. V. Ratcliff, T. Blackmore and Dr. V. Simmons. Previously reported.

Miss., Sumter.—The Hixon, Sumter & Northwestern Railroad Co., recently chartered, has organized with John Alexander president and F. J. Hughes secretary-treasurer.

Mo., Butler.—Albert Bunn of Kansas City and William Doane are reported to have begun preliminary survey for a proposed electric railway from Butler to Rockville, Mo.

Mo., Joplin.—The Missouri, Kansas & Texas Railway has received bids, but contract is not yet awarded for 3½ miles of line into the new union depot at Joplin. The route lies through rough country. S. B. Fisher is chief engineer, 407 Wainwright Bldg., St. Louis, Mo.

Okla., Chickasha.—The Oklahoma Central Railroad will build three miles of line out of the terminal at Chickasha, the work to be done under the charter of the Chickasha Terminal Co. F. C. Hand is chief engineer at Purcell, Okla.

Okla., Lawton.—A dispatch says that the Lawton & Fort Sill Electric Railway Co. has closed new articles of agreement and will immediately resume construction of its line from Lawton to Fort Sill.

Okla., Oklahoma City.—The McKenna Interurban Co. of St. Louis, Mo., is reported organized for an interurban electric railway from St. Louis to Oklahoma City via Ada, Roff and Stonewall; capital \$500,000; J. J. McKenna of Oklahoma City, Okla., is president; J. B. Wall is vice-president.

Okla., Oklahoma City.—The Red River Railroad Co., chartered in 1906, has changed its name to the Oklahoma Red River Railroad Co., capital \$5,000,000, and proposes to build from Oklahoma City to Houston, Tex., crossing the Red River near Grady and proceeding thence via Gainesville, Fort Worth, Dallas and the Trinity River Valley. Joseph O. Moore of Kansas City, Mo., is president, the other directors being J. W. Hocker of Purcell, Okla.; F. J. Hawk and S. C. Hawk of Oklahoma City. The cost of construction in Oklahoma is estimated at \$7,000,000.

Tenn., Memphis.—The Tennessee Traction Co., which proposes to build a line from Memphis, to Jackson, Tenn., 75 miles, has, it is reported, decided to increase its capital from \$50,000 to \$2,000,000 for the purpose of building branches to Dyersburg, Tenn.; Covington, Ripley and Fulton, Ky. W. K. Burton of Memphis and others are interested.

Tex., Abilene.—An officer is quoted as saying contract has been signed for construction of the proposed railway from Abilene to Hamlin, Tex., as previously reported. Work is to begin immediately, and the line is to be completed and in operation by October 1 of next year. Morgan Jones is promoter and Percy Jones engineer of the line. Address, Abilene, Tex.

Tex., Fredericksburg.—F. W. Steber, chief engineer of the North & South Railroad Co., says a dispatch, has completed a survey from Boerne via Sisterdale to Fredericksburg, 40 miles.

Tex., Houston.—The Penn City Land Co. is reported to have announced that it will build an interurban railway from Green's Bayou to Houston and also a railroad to connect with the Houston Belt & Terminal Co.'s line.

Tex., Kyle.—The International & Great Northern Railroad, it is reported, has agreed to build a railroad to Hays City, work to begin by September 1. O. H. Crittenden is engineer at Palestine, Tex.

Tex., Laredo.—C. B. Wright, 142 South 3d

St., Philadelphia, Pa., president of the Rio Grande & Eagle Pass Railroad, contemplates, according to a dispatch, an extension along the Rio Grande Valley from Laredo to San Fordyee.

Tex., Merton.—Roach & Stansell of Memphis, Tenn., according to a press report, have secured another contract for 50 miles of grading on the Kansas City, Mexico & Orient Railway out of Merton. W. W. Colpitts, Kansas City, Mo., is chief engineer.

Tex., Seymour.—The Gulf, Texas & Western Railroad Co. is reported to have put engineers in the field to survey for its contemplated extension from Seymour to Paducah, Ky. McGarrel & Co., 5 Nassau St., New York, are interested.

Tex., Weatherford.—Construction is reported begun near Weatherford on the Chicago, Weatherford & Brazos Valley Railroad.

Tex., Weatherford.—Mitchell & Pigg, contractors, will, it is reported, begin construction of the Chicago, Weatherford & Brazos Valley Railroad in a few days, with L. M. Kirker in charge of construction.

Va., Abingdon.—The Laurel Fork & Mendota Railroad Co. of Abingdon has been granted a charter to build a line 45 miles long from Mendota to Laurel Fork, Va., in Washington and Smyth counties; capital from \$1000 to \$5000. The incorporators are W. B. Robertson, president; Alexander Studart, secretary and treasurer, both of Abingdon; C. E. Bolling and E. G. Leigh, Jr., both of Richmond; C. D. Langhorne, Mirauder; John Thompson Brown, Brierfield; John C. Dunbar, Lynchburg, Va.

Va., Fredericksburg.—A movement to build a railroad from Doswell, on the Chesapeake & Ohio Railway, through the Northern Neck via Tappahannock, has been started at Lancaster, Va., and a committee headed by Walter E. Hathaway of Lancaster has been appointed to solicit subscriptions. W. A. Jones of Warsaw, Va., Congressman from the First district; Channing M. Ward of Chicago and W. S. Upshur, assistant general freight agent of the Chesapeake & Ohio Railway, are also said to be interested.

Va., Fredericksburg.—The Richmond & Chesapeake Bay Railway Co., according to a dispatch, has completed survey for its line from Ashland to Fredericksburg, and thence to Washington, D. C. Estimates on construction are now being made; headquarters at Richmond, Va.

Va., Richmond.—The Richmond, Fredericksburg & Potomac Railroad, it is reported, will double-track and otherwise improve the Richmond Belt Line from Acca to the James River Bridge, besides changing street grades at crossings. C. W. Culp is superintendent at Richmond, Va.

Va., Spotsylvania.—A dispatch says it is contemplated to build a railroad from the sulphur mines in Louisa county to other sulphur mines near Knights branch, and it may be extended via Spotsylvania to Fredericksburg. The Mayor may be able to give information.

W. Va., Beckley.—A prominent officer of the Virginian Railway Co. denies the report that it contemplates building a line from Harper via Beckley and Mt. Hope to Paintsville.

W. Va., Gassaway.—T. W. Kirkbride, Inc., 162 Campbell Ave., Roanoke, Va., has contract for five miles of grade and masonry, besides 41 bridges, for the Elk River & Little Kanawha Railroad out of Gassaway; total contract amounting to about \$65,000.

W. Va., Morgantown.—The Morgantown & Kingwood Railroad, according to a dispatch, will extend its line from Rowlesburg to Elkins, W. Va., and survey is reported under way to connect with the Coal & Coke Railroad. J. K. Monroe is chief engineer at Kingwood, W. Va.

W. Va., Pemberton.—Reported that the Virginian Railway will immediately build an extension from Pemberton to Beckley Junction, six miles. H. Fernstrom is chief engineer at Norfolk, Va. An officer says that surveys have been made, but construction is not yet authorized. It will be an extension of the Winding Gulf branch.

STREET RAILWAYS

Ark., Jonesboro.—Preston Hatcher has applied for a street-railway franchise from the City Council.

Ark., Texarkana.—The Texarkana Gas & Electric Co. announces that the Rose Hill Car Line will be extended one and a half miles to the plant of the Union Glass Co. George Barnard, chief engineer, will have charge of construction.

Tex., Greenville.—By popular vote a franchise for a street railway in Greenville has been granted to S. A. Price and associates

of Dayton, Ohio. Five miles are to be built immediately.

Tex., San Marcos.—O. E. Metcalfe, County Surveyor, has begun preliminary survey for a street-railway system in San Marcos.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressor.—A. M. Carter, Jr., Box 26, Reynolds, Ga., wants prices on air compressor. (See "Pump, etc.")

Air Compressor.—See "Quarrying Equipment."

Art Glass.—W. B. Talley, Jacksonville, Fla., wants prices on art glass.

Automatic Cut-off.—M. B. Ise Kream Co., 205 South 8th St., Waco, Tex., wants automatic cut-off to control steam supply at 180 degrees F. for water-heated machine; wants steady temperature during operation of machine.

Baths Equipment.—Eutaw Baths Co., 308 North Eutaw St., Baltimore, Md., wants prices on shower baths, etc.

Boiler.—See "Quarrying Equipment."

Boiler.—See "Engine and Boiler."

Boilers.—Florida Bi-Products Co., W. F. Brook, secretary, 110 Temple Court Bldg., Atlanta, Ga., wants prices on boilers.

Boilers.—Eutaw Baths Co., 308 North Eutaw St., Baltimore, Md., wants prices on boilers.

Brick.—H. D. McCoy, Cleburne, Tex., wants prices on Coffeyville red face brick, etc.

Bridge.—J. Barry Mahool, president Board of Awards, City Hall, Baltimore, Md., will receive bids until August 17 for construction of steel and concrete bridge across Jones' Falls at Pratt St.; bids must be addressed to Board of Awards, City Register's office, City Hall, accompanied by check for \$1000; specifications, etc., on file at office of O. F. Lackey, Harbor Engineer, City Hall. (Lately mentioned.)

Bridge.—W. T. Bond, 65 Madison Ave., Bartlett, Tenn., will receive bids until August 2 for construction of steel bridge and about 500 feet of levee work on Bartlett and Germantown Rd.; apply to W. T. Bond or office of James Hood.

Bridge.—Board of Awards, J. Barry Mahool, president, care City Register, City Hall, Baltimore, Md., will receive bids until August 3 for construction of concrete steel bridge across Stony Run, Wyman Park, in accordance with plans and specifications of Board of Park Commissioners; certified check \$2000; W. S. Manning, general superintendent Board of Park Commissioners.

Bridge Construction.—C. R. Humphreys, City Engineer, Wilmington, N. C., will receive bids until August 16 for furnishing and erection of superstructure of steel highway bridge across 6th St.; approximately 12 feet; information, specifications, etc., on file at office City Engineer.

Building Materials.—Edward A. Nolan, 216 Curry Bldg., Tampa, Fla., wants prices on building materials for two-story reinforced concrete and cement-block temple and theater building.

Building Materials.—Fred A. Jones Building Co., Houston, Tex., wants prices on material (except mechanical lines) for constructing 10-story hotel.

Building Materials.—Eutaw Baths Co., 308 North Eutaw St., Baltimore, Md., wants prices on building materials.

Building Materials, etc.—Bonniwell & Son, St. Petersburg, Fla., want prices on metal tile, rough-pressed and tapestry brick, buff pressed brick, ornamental glass, structural steel and iron, metal ceiling; also plaster boards and glass-top ventilators.

Bulldozer.—See "Machine Tools."

Boiler.—See "Engine and Boiler."

Briquetting Machinery.—C. C. Mackee

Company, No. 4 Queen's road, Hongkong, China, wants information and prices on machinery for compressing salt into bricks; wants two machines, 5 and 15 to 20 tons capacity daily; bricks to weigh 1 catty to 10 catties.

Calcium Chloride.—Leonard Anderson, Lubbock, Texas, wants to buy (from manufacturers) calcium chloride in large quantities.

Cars.—Frank Jones, Oak Grove, La., will want six flat and four box cars; also two passenger coaches.

Concrete Trench.—Department of Interior, Washington, D. C. Sealed proposals in duplicate will be received until August 8, and then opened, for construction of a concrete trench from intersection of tunnel connecting old Postoffice and Patent Office buildings to Pension Office building, to be used in connection with extension of heating system to last-named building, in accordance with specifications and drawings, copies of which may be obtained on application to chief clerk of this department; a certified check in sum of \$10 required to insure safe return of drawings; Frank Pierce, acting Secretary.

Concreting, etc.—Louisville Water Co., Theodore A. Leisen, chief engineer, Louisville, Ky., will receive bids until July 30, addressed to Board of Water Works, for cleaning and concreting both sections of Crescent Hill reservoir; plans, etc., on file at office of chief engineer, 439 3d St.

Cooking Appliances.—J. W. Miner, Ronda, N. C., wants to correspond with manufacturers of steam cooking appliances.

Corrugated Iron.—American Reduction & Fertilizer Co., 20th and Wyoming Sts., Kansas City, Mo., wants 175 squares corrugated iron.

Crane.—See "Quarrying Equipment."

Creamery Machinery.—See "Peanut-butter Machinery."

Crusher.—See "Quarrying Equipment."

Dam.—Holland-Texas Dam Irrigation Co., T. N. Pienot, president, Cotulla, Tex., will receive bids until August 1 for construction of reinforced-concrete dam in La Salle county; plans, etc., on file at office of Cotulla State Bank and with Bartlett & Ranney, civil engineers, San Antonio, Tex.; certified check, 2½ per cent. amount bid to accompany each proposal.

Drainage.—Fiscal County Commissioners, Jefferson county, Louisville, Ky., will receive bids until August 1 for construction of portion of drainage ditch at Mill Creek; plans, etc., on file at office of S. F. Crevelius, engineer, 408 Equitable Bldg., Louisville, where they may be procured at cost of \$2 per set; certified check \$1000 to accompany each bid; H. D. Robb, chairman.

Dredgeboat.—Florida Bi-Products Co., W. F. Brabrook, secretary, 110 Temple Court Bldg., Atlanta, Ga., wants prices on dredgeboat.

Dredging, etc.—Geo. R. Spalding, captain, engineers, Jacksonville, Fla., will receive bids until August 24 for dredging and removal of rock in Biscayne Bay.

Driers.—Florida Bi-Products Co., W. F. Brabrook, secretary, 110 Temple Court Bldg., Atlanta, Ga., wants prices on driers for fertilizer (humus) factory.

Electric-light Plant.—Monarch Mill & Grain Co., Whitesboro, Tex., wants electric-lighting plant; 160 to 200-light capacity.

Electrical Equipment.—Eutaw Baths Co., 308 North Eutaw St., Baltimore, Md., wants prices on electrical equipment.

Electrical Machinery.—Virginia City Motor Co., Danville, Va., will want dynamo.

Elevator.—C. D. Gilchrist, 3128 South Benton St., Kansas City, Mo., wants prices on elevator.

Engine and Boiler.—Blackstone Lumber & Manufacturing Co., Blackstone, Va., wants second-hand 80 to 100-horse-power boiler and engine; give full information.

Engine and Boiler.—Monarch Mill & Grain Co., Whitesboro, Tex., wants boiler and engine.

Engines.—J. W. Miner, Ronda, N. C., wants quotations on 1½ to 2 horse-power steam engines; new or second-hand.

Engines.—Florida Bi-Products Co., W. F. Brabrook, secretary, 110 Temple Court Bldg., Atlanta, Ga., wants prices on engines.

Evaporating Machinery.—F. C. Dickson, care of Kentucky Public Elevator Co., 14th St., between Kentucky and Oak Sts., Louisville, Ky., wants addresses of manufacturers of fruit-evaporating machinery.

Farm-implement Parts.—See "Steel Teeth."

Fence Machinery.—See "Wire-fence Machinery."

Firearms.—See "Iron Tubing," etc.

Feed Mill, etc.—Monarch Mill & Grain Co.,

Whitesboro, Tex., wants attrition mills and bolting machinery especially adapted for pulverizing corncocks; also rolls and bolts for making meal and chops.

Galvanized Iron.—Monarch Mill & Grain Co., Whitesboro, Tex., wants painted and galvanized iron.

Gas Engine.—Virginia Blower & Heater Co., Richmond, Va., wants second-hand five-horse-power gas engine (Otto, Charter, White & Middleton preferred).

Gasoline Engine.—South Florida Contracting Co., Room 1 Raymonds Bldg., Lakeland, Fla., wants prices on gasoline engine.

Gasoline Engine.—N. C. McFadyen, Cameron, N. C., wants small second-hand gasoline engine for wood-saw outfit.

Grading.—D. G. Brown, clerk Board of Control, Wheeling, W. Va., will receive bids until July 26 for grading on Belmont St. from Wood to Vine St.; plans, etc., on file at office of City Engineer; certified check \$100.

Heating Plant.—Frank Pierce, acting secretary, Department of Interior, Washington, D. C., will receive bids in duplicate until August 8 for installation of vacuum heating system for Pension office building; plans, etc., on file at office of chief clerk; certified check \$25.

Heating Plant, etc.—Dr. A. S. Priddy, executive officer Virginia State Epileptic Colony, Lynchburg, Va., will receive bids until August 1 for complete heating system, boiler, power and lighting plant, etc.; four-inch pipe line connecting colony with water main of city of Lynchburg; about 5000 feet; certified check, \$250.

Heating Plant.—C. D. Gilchrist, 3128 South Benton St., Kansas City, Mo., wants prices on heating plant.

Heating and Ventilating Apparatus.—Treasury Department, office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received until August 26, for installation of steam-heating and ventilating apparatus, etc., for United States postoffice at St. Louis, Mo., in accordance with drawings and specifications, copies of which may be had at this office or at office of superintendent of construction at St. Louis, at discretion of architect.

Heating and Ventilating Plants.—Lawrence T. Royster, chairman Board of Public School Education, Norfolk, Va., will receive bids until August 3 for installation of ventilating and heating system in Annexes School No. 1 for Brambleton and Atlantic City School No. 2, and for electrical work in both buildings and Atlantic City School No. 1; plans, etc., on file at office of Ferguson, Calrow & Taylor, Law Bldg., Norfolk, Va.

Ice Machinery.—W. M. Shockley, Lowell, Fla., in market for ice machinery.

Ice Machinery, etc.—Frank Wright, Cave Spring, Ga., wants dealers' prices on ice-manufacturing machines and family refrigerators.

Iron Tubing, etc.—S. D. Demetrides, Samson, Black Sea, wants data, prices, discounts, etc., on iron tubing; also on iron wire, oil, firearms, rubber shoes, etc.

Lathe.—B. D. Powleson, 220 Broadway, New York, in market for used engine lathe, 36 inches by 20 feet.

Levee Construction.—Mississippi River Commission, U. S. Engineer's Office, Room 29 Custom-house, Memphis, Tenn., will receive bids in triplicate until August 8 for construction of about 1,650,000 cubic yards of levee work; M. L. Walker, Major, Engineers.

Levee Earthwork.—Robert R. Ralston, Captain, Engineers, 3338 St. Charles Ave., New Orleans, La., will receive bids until August 9 for constructing 26,000 cubic yards of earth-work in Lake Borgne Levee District.

Light Fixtures.—Treasury Department, office of Supervising Architect James Knox Taylor, Treasury Bldg., Washington, D. C. Sealed proposals will be received until August 19, and then opened, for furnishing and installing lighting fixtures in U. S. buildings at Gonzales, Tex.; Greenwood, S. C.; Michigan City, Ind.; Paris, Ky.; Pittsfield, Mass.; Augusta, Maine, and Eureka, Cal., in accordance with drawings and specification, copies of which may be obtained at this office at discretion of supervising architect. Each proposal must be accompanied by certified check for 10 per cent. amount thereof, drawn to order of Treasurer of United States.

Lighting Fixtures.—W. B. Talley, Jacksonville, Fla., wants prices on lighting fixtures for building at Daytona, Fla.

Limestone.—W. B. Talley, Jacksonville, Fla., wants prices on limestone for building at Daytona, Fla.

Locomotives.—Frank Jones, Oak Grove, La., will want two locomotives.

Machine Tools.—Virginia City Motor Co.,

Danville, Va., will want breast drill, lathe, drill press and span for emery wheel.

Machine Tools.—Virginia Blower & Heater Co., Richmond, Va., wants following second-hand tools: (1) Combination punch and shear; belt driven; capacity, punch 13-16-inch holes through ½-inch plate or its equivalent; depth of throat, 36 inches; right-angle drive; (2) 8-foot belt-driven square or gate shear; capacity, No. 18 steel full length of plate; (3) bulldozer or bending machine for bending flats and angles cold; capacity, for 1½-inch by 1½-inch by 3-16-inch angle iron and 2-inch by ½-inch flats; (4) sensitive drill of either post or base type; maximum capacity, ½-inch hole; belt driven; revolving bed; (5) belt-driven trip hammer, 200 pounds; capacity, to draw out 4-inch-square iron.

Mining Machinery.—M. Groenendyke, 1208 Realty Bldg., Charlotte, N. C., secretary Surface Hill Mining & Milling Co., wants prices on gold-mining machinery.

Merry-go-rounds.—Abbott & Co., Bowling Green, Va., want to correspond with manufacturers of merry-go-rounds.

Oil Engines.—Empire Engine & Machinery Co., 220 Broadway, New York, in market for second-hand Hornsby-Akroyd oil engines.

Paving.—Board of Public Works, Louisville, Ky., will receive bids until August 2 for vitrified street construction of portions of Charles, Sycamore, Samuel, Hill and 11th Sts.; estimated cost, \$33,000.

Paving.—John B. Ashe, Harris County Auditor, Houston, Tex., will receive bids until August 9 for construction of West Montgomery Rd. with gravel and shell or shell only; plans and specifications on file at office of County Engineer.

Paving.—R. L. Williford, Freestone County Judge, Fairfield, Tex., will receive bids until August 15 for construction of system of county roads in District No. 1; plans, etc., on file at office of J. G. Browne, civil engineer, Houston, Tex.; certified check, \$200.

Paving.—City of Norfolk, Va., invites bids for grading and paving Pulaski St., including furnishing sand; grading and paving Elizabeth St. with Belgian blocks; certified check, \$300.

Paving.—Robert Tait, City Treasurer, Montgomery, Ala., will receive bids until August 1 for paving approximately 1115 square yards of roadway of South Highland Court with brick, asphalt, bitulithic, granitoid block, mineral rubber or wood-block pavements, together with necessary work of grading, etc.; separate bids will be received for sidewalks on both sides of South Highland Court with Schillinger or hexagon blocks; plans, specifications, etc., on file at office of City Engineer.

Paving, etc.—City of El Reno, Okla., will receive bids until August 6 for improvements to Bickford Ave. in Hickox Addition, including grading, curbing, guttering, paving and draining; plans, etc., on file at office of City Clerk. Address The Mayor.

Paving.—City of El Reno, Okla., will receive bids until August 3 for improvements to Rock Island Ave.; plans, etc., on file at office of City Clerk. Address The Mayor.

Piping.—City of Roxboro, N. C., N. Lunsford, Mayor, will open bids September 1 for water-works improvements, including 1000-foot pipe extension; cost \$2500.

Piping.—See "Iron Tubing, etc."

Plaster Boards.—Bonniwell & Son, St. Petersburg, Fla., want samples and prices of plaster boards. (See "Building Materials, etc.")

Power Plant.—Bids invited for furnishing and erecting machinery to operate Stoney Gate valves for controlling culverts and machinery to operate cylindrical valves for controlling lateral culverts of upper lock at Gatun and Pedro Miguel lock. Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. September 16, at which time they will be opened in public. Blanks and general information relating to this circular (No. 596) may be obtained from office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston, Tex.; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma.

Power Plant.—Bids invited for furnishing and erecting machinery to operate Stoney Gate valves for controlling culverts and machinery to operate cylindrical valves for controlling lateral culverts of upper lock at Gatun and Pedro Miguel lock. Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. September 16, at which time they will be opened in public. Blanks and general information relating to this circular (No. 596) may be obtained from office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston, Tex.; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma.

Peanut-butter Machinery.—W. M. Shockley, Lowell, Fla., in market for peanut-butter machinery.

Pump, etc.—A. M. Carter, Jr., Box 26, Reynolds, Ga., wants prices on pneumatic pump; capacity, 40 gallons per minute under 140 pounds pressure; also air compressor for supplying same.

Pump.—Monarch Mill & Grain Co., Whitesboro, Tex., wants deep-well pump.

Pumping Station.—H. C. Wagamon, Milton, Del., is interested in pumping station for town of 1000 population; wants information on equipment; town has stream of sufficient size.

Printing Machinery.—J. A. Scarboro, Magnolia, Ark., will purchase printing machinery.

Quarrying Equipment.—American Stone Co., Box 538, Richmond, Va., wants prices on new or second-hand machinery, including 300-horse-power boiler, air compressor of about 1200 feet per minute capacity, No. 8 crusher, car haul and locomotive crane; for granite quarry.

Rails.—Bay City Sawmill Co., Apalachicola, Fla., wants one mile of 50-pound new or re-laying steel rail; prices delivered.

Railway Construction Work.—Sealed bids will be received by Cullman Coal & Coke Co., Cullman, Ala., for completion of following: (1) 61,161 cubic yards of earthwork; 42,536 cubic yards of loose rock; 5950 cubic yards of solid rock; (2) delivery of 654,184 feet B. M. trestle timbers; erecting 862,809 feet B. M. trestle construction; delivery of 654,184 feet B. M. trestle timbers and erecting 24 trestles containing 862,809 feet B. M.; (3) hauling and placing 1348 feet of double-strength sewer pipe culvert, average haul two miles; (4) finishing subgrade on 18 miles of track; (5) furnishing posts and erecting 36 miles standard railroad fence; (6) delivery of 35,514 first-class crossties on right of way; delivery of 4214 seconds on right of way. Specifications, maps, profiles and general plans may be examined after July 28; sufficient bond required of accepted bidder; bids opened on August 1 and forwarded to Holland for examination and approval.

Road.—J. F. Witt, Dallas County Engineer, Dallas, Tex., received bids until July 29 for construction of Edgefield Ave. road, distance of one mile; plans, etc., on file at office of County Engineer; bids to be made on blanks furnished by county; certified check 3 per cent. of bid to accompany each proposal.

Roads.—J. F. Witt, Dallas County Engineer, Dallas, Tex., will receive bids until July 29 for construction of Garland and Housley Rd.; plans and specifications on file at office of County Engineer; bids to be made on blanks adopted by Commissioners' Court; certified check 5 per cent. of bid to accompany each proposal.

Road.—W. E. Battle, Mayor, Perry, Fla., will receive bids until August 25 for paving from three to five miles of streets; bids must be by square yard; plans and specifications on file at office of J. P. Jones, Clerk.

Road Construction.—Henry G. Shirley, Baltimore County Roads Engineer, Courthouse, Towson, Md., will receive bids until August 4 for improvement to Lawrence Ave. from Altamont to Paradise Ave., distance of 1500 feet; bids to be accompanied by certified check for \$200; plans and specifications on file at office of Highways Commission, Towson.

Road Construction.—H. D. Lampley, Judge of Probate, Greenville, Ala., wants to correspond with engineers skilled in road building and who make specialty of sand-clay work.

Road Construction.—John M. Dennis, Rider, Md., will receive bids until August 3 for grading, bridging and draining Dennis Ave. from Joppa Rd. to Seminary Ave., about 6000 feet; proposals, etc., on file at residence of Mr. Dennis; certified check \$100.

Roofing.—H. D. McCoy, Cleburne, Tex., wants prices on tile roofing.

Rubber Shoes.—See "Iron Tubing, etc."

Salt Machinery.—See "Bricketting Machinery."

Sawmill Machinery.—Craggy Lumber Co., Swannanoa, N. C., wants machine to simplify sawing of quartered oak.

Sawmill.—Office of Commissioners of District of Columbia, Washington, D. C. Sealed proposals will be received until July 28 for furnishing sawmill outfit, set up and ready for operation at District Government Workhouse site, Occoquan, Va.; blank form of proposal, specifications and all necessary information may be obtained upon application to property clerk, District of Columbia, Room 220 District Bldg.; Cuno H. Rudolph, John A. Johnston, E. M. Markham (acting), Commissioners, District of Columbia.

Sidewalk, Curb and Gutter.—City of Dothan, Ala., will open bids August 8 for construction of approximately 12 miles of side-

walk, curb and guttering; plans and specifications on file at office of R. W. Lisenby, clerk; certified check \$2000; S. C. Stallings, engineer.

Sewers.—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until August 1 for construction of lateral sewers in following additions: Portions of Central Park, Ross-Mann, Grand View, Central Northwest, Jacquot, University, etc.; plans and specifications on file at office of City Clerk; each district to be bid separately; certified check, 3 per cent. of bid.

Sewer Construction.—Sealed proposals for construction of Section "A" Western Interceptor, contract No. 72, will be received at office of Commissioners of Sewerage, 605 Equitable Bldg., Louisville, Ky., until 12 o'clock noon August 5. Work consists mainly of construction of about 3239 feet of reinforced concrete sewer, diameter 5 feet, including about 3239 feet of earth excavation, average cut about 19.1 feet; about 1450 cubic yards of concrete, and about 67,000 pounds of steel. Plans and specifications may be seen at office of Commissioners and of Harrison P. Eddy, consulting engineer, 14 Beacon St., Boston, Mass. Sealed bids should be endorsed "Proposal for Section 'A' Western Interceptor" and addressed to Commissioners of Sewerage, Equitable Bldg., Louisville, Ky. Each bid must be accompanied by certified check for at least 7 per cent. of total amount of bid or bidder's bond, as described in form of proposal; P. L. Atherton, chairman; Chas. P. Weaver, secretary and treasurer; J. B. F. Breed, chief engineer.

Sewer System.—P. Whitworth, Captain and Quartermaster, Fort Crockett, Galveston, Tex., will receive bids until August 22 for construction of sewer system and sewerage pumping plant.

Sewers.—L. S. Smothers, chairman Sewer Commissioners, District No. 58, Little Rock, Ark., will receive bids until August 1 for construction of sewers; plans and specifications on file at office of W. F. Reichardt, secretary, 102 Louisiana St.

Steam Specialties.—See "Automatic Cut-off."

Steel Cells, etc.—Proposals will be received at office of City Engineer until 12 o'clock noon August 4, and then opened, for erection of steel cells and alterations of Alexandria, Va., jail. Plans and specifications can be seen at City Engineer's office; usual rights reserved; Chas. B. Marshall, chairman committee on public property.

Steel Castings, etc.—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until August 19 for furnishing steel, castings, manganese-steel bushings, steel, iron, brass condensers, etc.; blanks and general information relating to Circular No. 598 may be obtained at above office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Steel Teeth.—Virginia Blower & Heater Co., Richmond, Va., wants approximately 20,000 straight cultivator teeth, about 1½ inches wide by 8 inches long; 12,000 straight spring steel teeth ¼ inch square and sharpened at one end; 65,000 curved spring steel weeder teeth about 18 inches long all; wants to correspond with manufacturers.

Stone Trimmings.—H. D. McCoy, Cleburne, Tex., wants prices on stone trimmings.

Street Signs.—R. W. Burks, first assistant engineer, Louisville, Ky., wants to correspond with manufacturers of street signs for city use.

Tile.—See "Roofing."

Ventilators.—See "Building Materials, etc."

Wire.—See "Iron Tubing, etc."

Water-works.—See "Pumping Station."

Water-works.—American Agricultural Chemical Co., 229 Bay St. East, Savannah, Ga., wants bids for installing water-works system for fire protection on factory site.

Water-works Equipment.—J. A. N. Farley, Hastings, Okla., wants prices on two, four and six-inch pipe, steel tower and tower, etc., for proposed city water-works; estimated cost \$30,000.

Water-works.—Russellville Water & Light Co., Russellville, Ark., with offices at Pine

Bluff, Ark., wants to correspond with contractors, etc., relative to construction of proposed water plant at Russellville; probable cost, \$60,000.

Wire-fence Machinery.—E. E. Antrim, Vincentown, N. J., wants machine to make wood paling fence, woven together with wire.

Well Drilling.—H. F. Byrd, Winchester, Va., wants to correspond with parties drilling oil wells at so much per foot.

Woodworking Machine.—South Florida Contracting Co., Room 1 Raymonds Bldg., Lakeland, Fla., wants prices on universal woodworking machine for contractors.

INDUSTRIAL NEWS OF INTEREST

Remove Their Offices.

The Alan Wood Iron & Steel Co. and the Upper Merion & Plymouth Railroad Co. announce the removal of their offices from 513 Arch St. to the Morris Bldg., 1421 Chestnut St., Philadelphia.

Tiles, Piling, Poles and Posts.

A Southern company extensively engaged in the manufacture and wholesale trade of hardwood, pine sawn and hewn railroad ties, timbers, piling, poles, posts, staves, logs, etc., invites correspondence from those who desire to purchase products of this character. Address The James J. Copellar Tie & Timber Co., Shreveport, La.

Wants Superintendent for Office Buildings.

Parties interested in obtaining a position as superintendent of office buildings in a thriving Southern city of 125,000 inhabitants are invited to communicate with No. 637, care Manufacturers Record, Baltimore. An experienced man is desired to take charge of a modern 16-story and a new 7-story building.

Pays a Large Dividend.

As indicating the large volume of trade which it handles annually, the Orenstein-Arthur Koppel Company, Pittsburg, has declared a dividend for 1909 of 12 per cent. on its capital stock of \$6,500,000. Its surplus fund amounts to \$1,800,000. This company manufactures industrial and portable railways and maintains Southern agencies at Birmingham, Houston, Augusta and Norfolk.

The Dayton Ice Machine Co.

It is announced that the Dayton Ice Machine Co., Dayton, O., has purchased the plant and machinery from the receiver of the previous company of similar name and will engage in the manufacture of ice-making and refrigerating machinery. The new company is capitalized at \$50,000, with Joseph Meyer president and treasurer, William C. Hester vice-president and C. N. Lupton secretary.

Good Foreign Orders.

Several important foreign orders have recently been received by the W. P. Callahan Company, Dayton, O., for its cottonseed-oil machinery. Included in these is one for a 12-ton six-press mill to go to Turkey. This is for complete equipment, including everything but the boilers. Another is a 60-ton four-press equipment of pressroom machinery, which will go to India. R. R. Nolen of Dallas, Tex., will go to India to install the machines.

Record Order for Telephone Selectors

What is said to be the largest order for railway telephone selectors ever reported has just been placed by the Atchison, Topeka & Santa Fe Railroad with the Western Electric Co., 463 West St., New York. The order provides for more than 600 of the new selectors recently developed by Western Electric engineers. Following successful experimental installations, the New York Central and Pennsylvania systems have also placed repeat orders for the new selector.

Milwaukee Corrugating Co.'s Warehouse.

Announcement is made that the large warehouse which has been in course of construction for a number of months at Kansas City for the Milwaukee Corrugating Co., South Bay and Aldrich Sts., Milwaukee, Wis., has been completed. This will double the company's facilities at Kansas City and enable it, with its large stock, to serve the trade throughout the Southwest and the territory adjacent to Kansas City to greater and better advantage.

Removes Its Denver Office.

The Jeffrey Manufacturing Co., main office and plant, Columbus, O., is changing the location of its Denver office from No. 1711 Tremont Pl., and after August 1 will occupy a commodious suite of rooms in the First National Bank Bldg. This company, besides maintaining a large selling force in more than a dozen of the leading cities of this country, also maintains a corps of engineers at its branch offices in the following cities: Chicago, St. Louis, Denver, Montreal, Pitts-

burg; Charleston, W. Va.; Boston, New York and Birmingham. There are also nearly one hundred Jeffrey agencies in other cities in this country and abroad. Among the products of the company are elevating, conveying and mining machinery.

Linseed Oil-Mill Machinery.

The Buckeye Iron and Brass Works, Dayton, O., has shipped a complete cottonseed-oil mill equipment to Edgewater, N. J., for Spencer Kellogg & Sons, Buffalo, N. Y. The latter company, which is one of the largest linseed-oil producers, has 186 Buckeye presses in its Buffalo mill and 24 in Minneapolis. The mill at Edgewater is a new plant, and the order received by the Buckeye Iron and Brass Works is the result of experience with the older machinery. The presses going to Edgewater are each 20-box machines.

Will Establish Branch Offices.

Owing to urgent demands the Eureka Fire Hose Manufacturing Co., of New York will establish branch offices on or about September 10 in Minneapolis, North and South Dakota, Iowa, Nebraska, New Mexico, Arizona, Nevada, Montana, Wyoming, Washington and Wisconsin. These branch stores will carry sufficient stock to meet all orders, and patrons will have the advantage of dealing direct with the Eureka Fire Hose Manufacturing Co., instead of through agents as heretofore.

Equipment for Wachovia National Bank.

Contracts recently awarded for equipment for the Wachovia National Bank, Winston-Salem, N. C., by Milburn, Heister & Co., architects, Washington, D. C., include the following: To York Safe & Lock Co. of York, Pa., for vault doors for \$5000; to L. B. Brickenstein & Co., Winston-Salem, for heating, \$743; for bank fixtures and equipment, to the Pooley Company of Philadelphia and New York, \$10,400; for electric fixtures, to Wahle-Phillips Company of New York, \$2000, and for hardware, to Mitchell-Vance Company, \$1300.

A Constantly-Increasing Trade.

Houston, Stanwood & Gamble, Cincinnati, O., reported that 1907 had been the most prosperous year in their existence as a firm. Since then, barring 1908, the figures have grown until their trade in hand shows an increase over 1907 of approximately 25 per cent., not including 12 days remaining before the close of the company's fiscal year. There is to be taken into consideration also the establishment during the panic year of 1908 of a new department—an extensive boiler shop—and its maintenance during that and subsequent years. Houston, Stanwood & Gamble manufacture heavy-duty throttling engines and engines of other types, boilers, etc.

Elect C. H. Todd President.

At a meeting of the board of directors of the Petroleum Iron Works Co. of Sharon, Pa., July 11, 1910, C. H. Todd of Washington, Pa., was elected president in the place of E. G. Wright, resigned. Mr. Todd, who was one of the founders of the Petroleum Iron Works Co., and who will be in active charge, is well and favorably known, especially in the Eastern and Southwestern oil fields. The directors reported the plant as operating on full time, with sufficient orders booked to insure steady work for several months. The financial position of the company was reported as unusually strong. The products of the Petroleum Iron Works Co. consist of steel-plate construction of all classes.

Officers Elected.

At a recent meeting of the directors of the Economy Oil Cup Co. at its offices at 103-116 Montgomery Bldg., Augusta, Ga., the following officers were elected: Eugene M. Crozier, president; H. E. Fitzgerald, vice-president and general manager; Frank E. Courtney, secretary, and M. C. Dowling, treasurer. This company manufactures the "Economy" oil cup for lubricating purposes, and the directors deemed it advisable to continue the present arrangement of having the cups manufactured under contract with the American Can Co. of Atlanta until after September 1, when the Economy company

will arrange for the erection of its plant. Two additional salesmen were engaged to handle the trade in New York and Pennsylvania.

Celebrates Founding of Establishment.

On Tuesday evening, July 19, the Keuffel & Esser Company, Hoboken, N. J., manufacturer of drawing materials and engineering supplies, celebrated the 43d anniversary of its establishment by a banquet to its employees at Grand View Park, in Jersey City Heights. Interest was added to the occasion by the fact that four employees this year complete their 25th year of service with the company. Appropriate gifts were presented to them by the firm and some very handsome testimonials given by their fellow-workmen. The unusual spectacle of 12 veteran employees who have completed a quarter of a century service with the company occupying the places of honor with the officers of the company was an inspiration to the 500 younger employees present. The affair proved such a success in cementing the interests of all concerned that the banquet will probably be made an annual event.

To Erect New Fan Shop.

It is announced that the Berlin Construction Co. of Berlin, Conn., has received contract for rebuilding the fan shop of the Green Fuel Economizer Co. at Matteawan, N. Y., which was almost totally destroyed by fire some weeks ago. It is expected to have the new building erected and complete, ready for occupancy, about the middle of August. The new shop will have about 25 per cent. more floor space than the old shop, including a testroom fully equipped with chambers, gauges, etc., suitable for making exhaustive tests on the capacity, pressure and efficiency of the improved fans built by this company for heating and ventilating, mechanical draft and other services. The new building will be of steel construction throughout and will be heated by the hot-blast system, with frequent outlets near the floor to secure uniform distribution of the heat. This system has been applied by the Green Fuel Economizer Co. with great success in several buildings that were peculiarly difficult to heat, such as the new foundry of the Waterbury Castings Co., where the wall surface is almost entirely of glass.

To Study Paving Methods.

A committee from the National Paving Brick Manufacturers' Association is visiting several cities in the middle West on a tour of investigation and inspection of street paving. The committee comprises Will P. Blair, secretary of the association; Merle Sidener of the publicity department, Edward D. Rich and M. W. Blair of Indianapolis. With it, as guests, are representatives of the American Society of Municipal Improvements and of the Organization of City Officials. The itinerary is Terre Haute and Indianapolis, Ind., and Cincinnati, Columbus and Cleveland, O., the purpose of the trip being to study the methods of street paving recommended by the National Paving Brick Manufacturers' Association and the results of such methods, with a view to recommending the best methods of construction and to securing standard paving specifications. In the party, in addition to the committee, are O. H. Rust, Toronto, Can.; E. A. Fisher, Rochester, N. Y., and Charles C. Brown, Indianapolis, representing the American Society of Municipal Improvements; E. H. Christ, Grand Rapids, Mich.; D. M. Roberts, Terre Haute, Ind.; Henry Maetzl, Columbus, O., and John B. Hittell, Chicago, Ill., of the Organization of City Officials.

Establishes New Offices.

The De La Vergne Machine Co., manufacturer of refrigerating and ice-making machinery, oil engines, gas engines and gas producers, foot of East 138th St., New York, announces that it has established an office at 280 Bourse Bldg., Philadelphia, with Henry J. Engel in charge. Mr. Engel has been connected with the De La Vergne Company for many years as a mechanical engineer and has had a varied experience with refrigerating equipment. The company has also established an office at 1124 Candler Bldg., Atlanta, with William Hargreaves in charge. Mr. Hargreaves will represent the company. In connection with the establishment of its Atlanta office the De La Vergne company states that it has no relation to present business conditions generally, but believes it will not be long before brewing industries in some parts of the South, which have been retarded by adverse legislation, will be revived, and this will mean opportunities for the sale of its products. The company also states that there seems to be more activity in the demand for ice-making machinery in the South.

lately than there has been for some time. In addition it is manufacturing an oil engine which it believes should have a good market in the South because of its efficiency and economy of operation.

Increasing Use of Water-Purifying Systems.

That operating steam boilers with bad feed water is wasteful and dangerous, engineers will admit. It takes but a little common sense to realize that to obtain the full efficiency of a steam plant the boilers must be clean all the time. They can be clean only by feeding them with water free from scale-forming and corroding substances. Steam-plant owners realize more and more the necessity of clean boilers and are constantly installing water-softening and purifying systems. A prominent manufacturer of equipment of this character is the Wm. B. Scaife & Sons Company of Pittsburgh, Pa. This company manufactures the Scaife and We-Fu-Go systems, and the following are recent orders which the company has received: Carnegie Coal Co., Oakdale, Pa., 750-horse-power We-Fu-Go system; Boston Rubber Shoe Co., Fells, Mass., 900-horse-power syphon system; Twin State Gas & Electric Co., Dover, N. H., 575-horse-power We-Fu-Go system; American Sheet & Tin Plate Co., Gay City, Ind., 1800-horse-power We-Fu-Go system; American Sheet & Tin Plate Co., Gas horse-power addition to present 6000-horse-power We-Fu-Go system; Cleveland Hardware Co., Cleveland, O., 1000-horse-power We-Fu-Go system; Pocahontas Cons. Collieries Co., Switchback, W. Va., 5000-horse-power We-Fu-Go system; Harkness & Cowing Co., St. Bernard, O., 300-horse-power We-Fu-Go system; Astoria Veneer Mills, Long Island City, N. Y., 1100-horse-power We-Fu-Go system.

Solved by Flake Graphite.

A manufacturer had an order for a machine that included three hollow gunmetal rollers, one weighing 1386 pounds, the other two weighing 752 pounds apiece. These rollers are heated by gas to a temperature of about 700 degrees, and it was found that any oil or grease would carbonize and cut the journals in a very short while. In this predicament it was suggested that the builders of the machine write the Joseph Dixon Crucible Co., Jersey City, N. J., concerning the use of graphite on the rollers. This was done and proper suggestions were made for the use of Dixon's flake graphite to be used alone. Some months later the makers wrote the Dixon company that the scheme had met with perfect success. Of how the graphite was applied, the letter is as follows: "The method of applying the graphite to the journals is very simple. The channels for conveying the lubricant to the journals are cut in the boxes about $\frac{1}{8}$ inch wide and $\frac{1}{4}$ inch deep, one on top and one at a little above and on each quarter. Besides this, a spiral groove of the same dimensions is cut for about two turns, commencing at about 1 inch from the other end of the box and near the bottom. These grooves are half round in section. Into the top straight groove a $\frac{1}{2}$ -inch pipe hole is drilled and tapped, a piece of $\frac{1}{2}$ -inch pipe screwed into this with a reducing socket on the top end to $\frac{1}{4}$ -inch pipe, a $\frac{1}{4}$ -inch nipple and a $\frac{1}{4}$ -inch cap complete the cup. A piece of 3-16-inch round C. R. steel with one end on the journal, with the other end up near the top of the cup, complete the device. The journals take about a dessert spoonful of graphite per day to each journal, the machine attendant occasionally removing the cap from the cup, churning down a little of the graphite with the 3-16-inch rod."

Flooded Double Pipe Brine Coolers.

A brine-cooling system which was recently patented and which is said to be simple, economical and efficient in its operation, is the flooded double-pipe system manufactured by the Baker Ice Machine Co., Omaha, Neb. The cooling surface consists of three-inch ammonia pipe with ends welded in, arranged one over the other. The pipes are arranged with an incline on one end equal to the diameter of the pipe. Each three-inch pipe is connected to a special ammonia fitting, which is so designed as to allow the liquid ammonia to be injected into the top pipe, filling this first pipe approximately half full. The surplus ammonia overflows into the lower fittings, filling the second pipe half full, and so on down from pipe to pipe in cascade fashion. The expanded ammonia is removed at the same end where the liquid is injected into the pipe or the overflow. Thus all ammonia gases are removed from each pipe separately. These ammonia expansion or cooling pipes are encased in five-inch tubes. The three-inch pipes are provided with a spiral, secured to the outer

periphery, so that the travel of the brine between the two pipes is lengthened and the speed thereby increased, the centrifugal force tending to throw the cool brine, which is heaviest, away from the center of gravity, giving a thorough agitation to the non-freezing mixture. The headers of each pipe are connected to a suction manifold, which couples up to each pipe, removing the gases from each one separately. The suction gases are finally brought to a liquid ammonia separator or entrainer. The separator is of ample proportions and is provided with a liquid gauge in order to indicate the height of the ammonia liquid in the separator. The annular space between the outer casing and the ammonia expansion pipe is of ample proportions to allow three to four times the amount of brine to be circulated at a low pressure. Large volumes of brine circulated at low pressure with a minimum of friction being especially desirable for ice-making tanks, as well as for brine tanks. Owing to the peculiar construction of these coolers they can be installed directly into ice-making and brine tanks. The expansion valve or liquid injector is so arranged with a pipe that it acts as a siphon, syphoning the liquid ammonia that may have been carried over into the separator, and returning same to the top pipe as already explained. With our system we eliminate the possibility of carrying over liquid ammonia to the compressor.

A Successful Convention.

A successful convention of managers and salesmen of Berry Bros., Ltd., of Detroit, was held on the 6th, 7th and 8th of July. About 65 of the company's traveling force, many accompanied by their wives and daughters, attended the convention. In his opening speech Jas. S. Stevenson, the general manager, expressed the hope that the convention room would prove a sort of intellectual hopper through which the proceedings would pass, all husk and chaff being removed, a good harvest of golden grain resulting for the delegates to carry home with them. This aspiration seems to have been fully accomplished, the salesmen declaring themselves mentally refreshed and ready to return to their work with augmented energy and experience. On Thursday afternoon the convention party left Berry Bros.' dock on a special boat for a trip around Belle Isle and Peche Island, proceeding to the Lighthouse Inn, where dinner was served. Dinner over, Jas. C. Kelly of New York was appointed toastmaster, and a number of short speeches were made, all indicative of the cordial feeling that prevailed. On Friday the party visited the hostelry at St. Clair Flats, where an excellent dinner was enjoyed. Mr. Stevenson, the general manager, was eulogized, and responded briefly but feelingly. Chas. H. Smith, read an original poem, entitled "Lest We Forget," and an improvised musical organization from the party rendered some tuneful selections with original words. The program as executed at the convention, including an inspection of the several departments of the company's plant, consisted of Mr. Stevenson's address; an address by Harry Hudler on "The Duty of a Salesman to His Firm"; address by A. D. Bulman on "Good Business: How to Get It and Keep It"; "Looking for New Trade," by George Kerr; "Complaints, Disagreements and Unjust Claims," by J. C. Kelly; "Suggestions for Increasing Business," by J. C. Kelly; "Baking Japans: The Best Method of Selling and Demonstrating Them," by J. Frank Brown; "Mixed Pickles," by Charles H. Smith; "Samples and the Necessity of Following Them Up," by Charles Magee; "Competition," by E. O. Hinton; "How to Obtain Business," by C. J. Reilly; "Finishing as It Applies to the Sale of Varnish," by P. B. Weeks; "From the Buyer's Standpoint," by F. L. Colby; "Credit Co-operation," by E. M. Dill, and "Publicity," by Harry Dwight Smith. Berry Bros. manufacture varnish, black shellac and refine wood alcohol, and their products are well and favorably known.

TRADE LITERATURE.

Wireduct.

Claiming that Wireduct has every quality desired in a flexible conduit and no undesirable features, the manufacturer of this product has issued a pamphlet describing it. Wireduct is said to be permanently flexible and never dries out or becomes brittle under any conditions. It is manufactured by the Electric Appliance Co., Chicago, New Orleans and other cities.

Weston Electrical Instruments.

A pamphlet which has been issued by the Weston Electrical Instrument Co., Waverly Park, Newark, N. J., presents a brief de-

scription of a new group of Weston electrical instruments. These include 14 different ranges of portable alternating-current ammeters, five different ranges of portable alternating-current milliammeters and seven different ranges of portable alternating-current voltmeters.

Briggs Concrete Spreader and Batch Mixer.

Advancing 10 reasons why the batch concrete mixer and Briggs concrete spreaders should be used on street foundation work, a pamphlet recently issued by the Briggs Labor Saving Specialty Co. of Waterloo, Iowa, is interesting. This company claims that by the use of these machines a greater daily yardage can be maintained than by any other method employed; the spreaders, with their broad tires, act like rollers on the grade; better concrete can be secured; no extra help is necessary in dumping; one spreader will hold as much concrete as a dozen men can wheel; a more uniform mixture, etc. Among the other products of the company are dump carts, wheelbarrows, dump wagons, steel garbage wagons, combined sanitary street cleaners, street-cleaning wagons and carts, sanitary garbage disposal plants, etc.

Plymouth Commercial Cars.

It is believed that in the near future the commercial car will prove one of the strongest factors in local transportation that has ever been known. This mode of transportation has already become so widely used that the possibility of making commercial cars so simple, efficient and economical of operation is becoming generally known. In the manufacture of cars of this character the Plymouth Motor Truck Co. of Plymouth, O., is prominent. This company manufactures commercial motor-driven cars for various kinds of service, using its double variable-speed friction transmission on all its products. It claims to employ the simplest forms of construction and is in a position to furnish any style body to meet individual requirements. The company has issued a catalogue illustrating and describing its cars, and presenting tables of specifications for standard trucks, observation cars and specifications general to all models.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., July 27.

The Baltimore stock market has been quiet during the past week. In the trading United Railways common sold from 14 $\frac{1}{4}$ to 14 $\frac{3}{4}$; do. trust certificates, 15 $\frac{1}{4}$ to 14 $\frac{1}{2}$; do. incomes, 58 $\frac{1}{2}$ to 58; do. funding 5s, 83 to 82; do. do. scrip, 82 $\frac{1}{2}$ to 83 $\frac{1}{2}$, with last sale at 83; United 4s, 84 $\frac{1}{2}$ to 83 $\frac{1}{2}$; United Light & Power 4 $\frac{1}{2}$ s, 88 $\frac{1}{2}$; Consolidated Gas, Electric Light & Power notes, 97 $\frac{1}{4}$ to 98; Consolidated Gas 5s, 107 $\frac{3}{4}$; do. 4 $\frac{1}{2}$ s, 90; Seaboard 4s, 84; do. stamped, 82 $\frac{1}{2}$ to 82; do. three-year 5s, 90 $\frac{1}{4}$; do. 10-year 5s, 90 $\frac{1}{4}$ to 90; do. adjustment 5s, 71 to 70%; Mt. Vernon-Woodberry Cotton Duck 5s, 72; G.-B.-S. Brewing 1sts, 41 to 40.

Citizens' Bank stock sold at 37 $\frac{1}{2}$; American Bonding, 79; Baltimore Trust, 167 to 166; Fidelity & Deposit, 143; Mercantile Trust, 137 $\frac{1}{2}$.

Other securities were traded in thus: Georgia Southern & Florida 5s, 106 $\frac{1}{4}$; Richmond & Danville gold 6s, 106; Virginia Century, 85 $\frac{1}{4}$; Georgia Southern & Florida equipment 4 $\frac{1}{2}$ s, 1911, 99 $\frac{1}{4}$; Maryland Electric 5s, 96 $\frac{1}{4}$ to 96; Baltimore, Sparrows Point & Chesapeake 4 $\frac{1}{2}$ s, 92 $\frac{1}{2}$; Knoxville Traction 5s, 101 $\frac{1}{2}$; Northern Central Railway stock, 126 to 124; Baltimore Traction (North Baltimore division) 5s, 109; Anacostia & Potomac 5s, 100 $\frac{1}{4}$; Georgia & Alabama Consolidated 5s, 102 $\frac{1}{2}$; Fairmont & Clarksburg Traction 5s, 95 $\frac{1}{4}$; Jamison Coal & Coke, George's Creek 5s, 90 to 89 $\frac{1}{2}$; Milwaukee Electric Railway & Light refunding 4 $\frac{1}{2}$ s, 93; Norfolk Railway & Light 5s, 98 $\frac{1}{2}$; Atlantic Coast Line stock, 107 $\frac{1}{2}$; Atlanta Gas 5s, 102; Virginia Midland 2d, 100 $\frac{1}{4}$; Milwaukee Gas 4s, 89 $\frac{1}{4}$; Atlantic Coast Line Consolidated 4s, 93 to 92 $\frac{1}{2}$; Charleston

Consolidated Electric 5s, 93; Georgia, Carolina & Northern 5s, 104; Baltimore Electric 5s, stamped, 86; City & Suburban (Baltimore) 5s, 105 $\frac{1}{4}$.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended July 27, 1910.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	102 $\frac{1}{4}$	102
Atlantic Coast of Conn.....	100	200	220
Georgia Sou. & Fla. 1st Pfd.....	100	92	92
Maryland & Pennsylvania.....	100	22 $\frac{1}{2}$	24 $\frac{1}{4}$
Seaboard Company Common.....	100	16	21
Seaboard Company 2d Pfd.....	100	... $\frac{1}{2}$	42 $\frac{1}{2}$
Southern Railway (V. T.) Pfd.100	46	... $\frac{1}{2}$	...
United Ry. & Elec. Co.....	50	14 $\frac{1}{4}$	14 $\frac{1}{2}$
Bank Stocks.			
Citizens' National Bank.....	10	37 $\frac{1}{2}$	38
Drovers & Mech. Nat. Bank.....	100	22	22
First National Bank.....	100	130	130
German-American Nat. Bank.....	100	107	107
Maryland National Bank.....	20	23 $\frac{1}{2}$	24
Merchants' National Bank.....	100	174	174
Bank of Baltimore.....	100	115	115
Exchange National Bank.....	100	154	154
Howard National Bank.....	100	13	14
Marine National Bank.....	30	42	42
Union National Bank.....	100	117	117
Second National Bank.....	100	195	200
Third National Bank.....	100	12	12
Western National Bank.....	20	... $\frac{1}{2}$	37
Trust, Fidelity and Casualty Stocks.			
Baltimore Trust.....	100	165	165
Continental Trust.....	100	20 $\frac{1}{2}$	20 $\frac{1}{2}$
Maryland Trust.....	100	50	50
Maryland Trust Pfd.....	100	96	103
Maryland Casualty.....	25	... $\frac{1}{2}$	91
Mercantile Trust & Deposit.....	50	135	171 $\frac{1}{2}$
U. S. Fidelity & Guaranty.....	100	140	145
United Surety.....	100	... $\frac{1}{2}$	80
Miscellaneous Stocks.			
Ala. Con. Coal & Iron.....	100	...	30
Ala. Con. Coal & Iron Pfd.....	100	...	70
Con. Cotton Duck Pfd.....	50	...	20
Con. Gas, Elec. Lt. & P. Com. 100	59	60	60
Gas, Elec. Lt. & P. Pfd.....	100	...	88
Consolidation Coal.....	100	...	107 $\frac{1}{2}$
Georges Creek Coal.....	100	...	101 $\frac{1}{2}$
Mer. & Miners' Trans. Co. V. T. 100	71	71	71
Railroad Bonds.			
Atlantic Coast 1st 4s.....	92	93	93
Atlantic Coast Conv. Deben. 4s.....	94	95	95
Atlantic Coast (Conn.) 5s, Ctrfs.....	101	...	...
Atlantic Coast new 4s, Ctrfs.....	88	...	...
Balto. & Harrisburg 5s.....	103	...	...
Carolina Central 4s.....	90	91 $\frac{1}{2}$	91 $\frac{1}{2}$
Charleston & West. Car. 5s.....	102 $\frac{1}{2}$	103 $\frac{1}{2}$	103 $\frac{1}{2}$
Coal & Coke Railway 5s.....	...	95	95
Col. & Green. 1st 6s.....	105 $\frac{1}{2}$	106 $\frac{1}{2}$	106 $\frac{1}{2}$
Florida Southern 4s.....	...	91	91
Georgia & Alabama 5s.....	102	102 $\frac{1}{2}$	102 $\frac{1}{2}$
Georgia, Caro. & North. 1st 5s.....	104	104 $\frac{1}{2}$	104 $\frac{1}{2}$
Georgia Pacific 1st 6s.....	109	...	...
Georgia South. & Fla. 1st 5s.....	106	106 $\frac{1}{2}$	106 $\frac{1}{2}$
Maryland & Pennsylvania 4s.....	...	89	89
Petersburg Class B 6s.....	...	118	118
Piedmont & Cumberland 1st 5s.....	99 $\frac{1}{2}$	100	100
Potomac Valley 1st 5s.....	105	107 $\frac{1}{2}$	107 $\frac{1}{2}$
Richmond & Danville 6s.....	...	106 $\frac{1}{2}$	106 $\frac{1}{2}$
Savannah, Fla. & West. 6s.....	...	127	127
Seaboard Air Line 4s.....	...	85	85
Seaboard 4s, Stamped.....	81 $\frac{1}{2}$	82	82
Seaboard Adjustment 5s.....	70 $\frac{1}{2}$	71 $\frac{1}{2}$	71 $\frac{1}{2}$
Seaboard 10-year 5s.....	98 $\frac{1}{2}$	98	98
Seaboard 3-year 5s.....	99	99 $\frac{1}{2}$	99 $\frac{1}{2}$
Seaboard & Roanoke 5s.....	103	103	103
Virginia Midland 3d 6s.....	106 $\frac{1}{2}$	107 $\frac{1}{2}$	107 $\frac{1}{2}$
Virginia Midland 4th 5s.....	104	...	...
Virginia Midland 5th 5s.....	105	...	92 $\frac{1}{2}$
Washington & Vandemere 4 $\frac{1}{2}$ s.....	90	90	90
West Virginia Central 1st 6s.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$
Wilmington & Weldon 4s.....	97	...	...
Street Railway Bonds.			
Anacostia & Potomac 5s, Gtd.....	102	102	100 $\frac{1}{2}$
Baltimore City Passenger 5s.....	99 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$
Baltimore, Spt. Pl. & C. 4 $\frac{1}{2}$ s.....	92 $\frac{1}{2}$	92 $\frac{1}{2}$	92 $\frac{1}{2}$
Baltimore Traction (N. Balto.) 5s.....	...	111	111
Central Railway (Balto.) Con. 5s.....	106	...	...
Central Railway (Balto.) Ext. 5s.....	106	...	...
Charleston City Railway 5s.....	100	102	102
Charleston Con. Electric 5s.....	94	94	94
Cir. & Suburban 5s (Balto.).....	105 $\frac{1}{2}$	105 $\frac{1}{2}$	105 $\frac{1}{2}$
City & Suburban 5s (Wash.).....	95	95	95 $\frac{1}{2}$
Fairmont & Clarksburg Trac. 5s.....	95	95	95
Knoxville Traction 5s.....	101 $\frac{1}{2}$	101 $\frac{1}{2}$	101 $\frac{1}{2}$
Lake Roland Elevated 5s.....	...	90	90
Lexington Railway 1st 5s.....	...	96	96
Macon Railway & Light 5s.....	...	96	96
Maryland Electric Railways 5s.....	96	96	96 $\frac{1}{2}$
Memphis Street Railway 5s.....	98 $\frac{1}{2}$	98 $\frac{1}{2}$	98 $\frac{1}{2}$
Metropolitan 5s (Wash.).....	107	110	110
Newport News & Old Point 5s.....	...	94	94
Norfolk & Portsmouth Traction 5s.....	81 $\frac{1}{2}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$
Norfolk Railway & Light 5s.....	...	99	99
United Railways 1st 4s.....	83 $\frac{1}{2}$	83 $\frac{1}{2}$	83 $\frac{1}{2}$
United Railways Inc. 4s.....	57 $\frac{1}{2}$	58	58
United Railways F			

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OFFICE OF VIRGINIA-CAROLINA CHEMICAL CO.,

Richmond, Va., July 8, 1910.

The Board of Directors of Virginia-Carolina Chemical Co. have this day declared a dividend of five (5) per cent. on the common stock of the Company, payable in four installments of 1 1/4% each on August 15, 1910; November 15, 1910; February 15, 1911, and May 15, 1911, to stockholders of record respectively on August 5, 1910; November 5, 1910; February 5, 1911, and May 5, 1911. For the purpose of said dividend the common stock transfer books will be closed from 3 P. M. August 5 to 10 A. M. August 16, 1910; from 3 P. M. November 5 to 10 A. M. November 16, 1910; from 12 M. February 4 to 10 A. M. February 16, 1911, and from 3 P. M. May 5 to 10 A. M. May 16, 1911.

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Cabarrus Cotton Mills (N. C.)	130	135
Chadwick Mfg. Co. (N. C.) Pfd.	100	180
Chiquita Mfg. Co. (S. C.)	180	106
Clifton Mfg. Co. (S. C.)	120	120
Columbus Mfg. Co. (Ga.)	93	98
Courtenay Mfg. Co. (S. C.)	100	99
Dallas Mfg. Co. (Ala.)	99	100
Darlington Mfg. Co. (S. C.)	78	85
D. E. Converse Co. (S. C.)	100	105
Drayton Mills (S. C.)	95	105
Eagle & Phenix Mills (Ga.)	117	117
Easley Cotton Mills (S. C.)	175	185
Encoke Mfg. Co. (S. C.)	57	60
Encoke Mfg. Co. (S. C.) Pfd.	95	100
Enterprise Mfg. Co. (Ga.)	80	85
Expansion Cotton Mills (Ga.)	200	200
Gaffney Mfg. Co. (S. C.)	78	85
Gainesville Cotton Mills (Ga.)	75	80
Glenwood Cotton Mills (S. C.)	150	102
Gluck Mills (S. C.)	100	102
Granby Cot. Mills (S. C.) 1st Pfd.	35	45
Graniteville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	58	61
Grendel Mills (S. C.)	110	117
Hartsville Cotton Mills (S. C.)	175	175
Henrietta Mills (N. C.)	160	175
Iman Mills (S. C.)	104	108
King Mfg. Co., J. P. (Ga.)	90	93
Lancaster Cotton Mills (S. C.)	130	130
Lancaster Cot. Mills (S. C.) Pfd.	97	100
Langley Mfg. Co. (S. C.)	120	127
Laurens Mills (S. C.)	127	130
Limestone Mills (S. C.)	160	170
Lockhart Mills (S. C.)	78	85
Lockhart Mills (S. C.) Pfd.	99	100
Loray Cotton Mills (N. C.) Pfd.	95	97½
Marlboro Cotton Mills (S. C.)	75	85
Mills Mfg. Co. (S. C.)	102	102
Mollohon Mfg. Co. (S. C.)	105	110
Monaghan Mills (S. C.)	109	112
Monarch Cotton Mills (S. C.)	105	105
Newberry Cotton Mills (S. C.)	125	130
Ninety-six Cotton Mills (S. C.)	140	150
Norris Cotton Mills (S. C.)	125	130
Olympia Cotton Mills (S. C.)	90	105
Orr Cotton Mills (S. C.)	105	105
Pacolet Mfg. Co. (S. C.)	101	101
Pacolet Mfg. Co. (S. C.) Pfd.	99	102
Pelzer Mfg. Co. (S. C.)	169	170
Piedmont Mfg. Co. (S. C.)	175	177
Poe Mfg. Co., F. W. (S. C.)	170	180
Saxon Mills (S. C.)	127	127
Sibley Mfg. Co. (Ga.)	71	78
Spartan Mills (S. C.)	131	140
Triton Mfg. Co. (Ga.)	130	140
Tucapac Mills (S. C.)	300	300
Union-Buffalo (S. C.) 1st Pfd.	74	89
Union-Buffalo (S. C.) 2d Pfd.	17	25
Victor Mfg. Co. (S. C.)	117	125
Warren Mfg. Co. (S. C.)	107	107
Warren Mfg. Co. (S. C.) Pfd.	106	110
Washington Mills (Va.)	28	28
Washington Mills (Va.) Pfd.	106	110
Whitney Mfg. Co. (S. C.)	122	122
Wiscasset Mills (N. C.)	135	135
Woodruff Cotton Mills (S. C.)	125	130
Woodside Cotton Mills (S. C.)	105	110
Watts Mills (S. C.)	95	100
Williamston Mills (S. C.)	120	125

FINANCIAL CORPORATIONS.

Ala., Birmingham.—The Prudential Savings Bank has filed articles of incorporation; capital \$50,000; incorporators, H. C. Harris, B. E. Huckabee, Ike Nicholson, W. B. Billups, D. R. King, N. B. Smith, R. A. Blount, Philip Shorter, W. W. Hadnott, W. C. Davis, J. W. Vaughn, W. M. Jackson, U. G. Mason, W. B. Johnson, S. L. Mason, O. W. Adams and F. W. Sykes. The institution is said to be backed by negroes.

Ala., Montgomery.—Official: The Union Life & Casualty Co. was promoted by R. S. Stringfellow with authorized capital of \$50,000 for the purpose of consolidating with the Union Casualty Co. of Montgomery. The merger occurred July 14, and the consolidated company is now known as the Union Casualty Co., the officers of the Union Life & Casualty Co. having charge; capital \$50,000. Mr. Stringfellow is president and J. R. Sayre, secretary. Among the stockholders are Dr. J. L. Gaston, J. L. Hall, president of the Alabama Bank & Trust Co.; F. Stollenwerck, vice-president, and A. M. Baldwin, president of the First National Bank; W. K. Pelzer, vice-president of the Durr Drug Co.; R. F. Ligon, clerk, Supreme Court, and Jacques Loeb of Winter, Loeb & Co. Business began July 14.

Ala., Little Rock.—The International Debutante Co. has filed articles of incorporation; capital \$50,000. Officers: B. F. Schwartz, president and treasurer; Louis Rich, vice-president; F. C. Enright, secretary.

Fla., Lakeland.—Official: The First National Bank chartered; capital \$50,000; surplus \$10,000. Business is to begin immediately with C. W. Deen, president; J. W. Bryant, vice-president, and C. M. Clayton, cashier; directors, H. J. Urane, J. W. Bryant, H. B. Carter, L. F. Henry, J. R. Weeks, W. R. Grover and C. W. Deen.

Fla., Sanford.—The Realty Trust Co., capital \$10,000, is reported incorporated by J. N. Whitner, S. O. Chase and B. F. Whitner, Jr.

Ga., Cordele.—The Cordele Savings and Loan Association, capital \$100,000, is reported organized by E. F. Strozier, O. T. Gower, W. E. Edwards and Walter F. Hall.

Ga., Rebecca.—The Bank of Rebecca is reported to have made application for a charter; capital \$25,000; incorporators, J. C. Smith, A. C. Ballington, W. D. Wilson, E. R. Nash, Lawson Smith, M. Lott, T. L. Field of Rebecca and John D. Walker of Sparta.

Ga., Vidalia.—Official: The First National Bank of Vidalia chartered; capital \$35,000.

Business is to begin September 1 with W. O. Donovan president and George S. Rountree cashier.

Ky., Franklin.—Official: The McElwain-Meguior Banking Co., changed to the McElwain-Meguior Bank & Trust Co., is to be incorporated with \$50,000 capital and \$12,500 surplus, all paid in when the institution begins business September 1; directors, E. J. Williams, T. W. Stringer, J. T. Lovell, N. T. Conn, W. B. Lewis and J. H. Covington.

Ky., Louisville.—Official: The Kentucky Securities Co., Paul Jones Blvd., has been incorporated with \$25,000 capital. Business is to begin at once with J. T. Gathright president and treasurer and manager; M. P. Sale, secretary.

La., Elton.—Official: The People's Bank chartered; capital \$15,000. Dr. S. A. Pennington, president; W. Putnam, vice-president; E. S. Hart, cashier. Business began July 1.

La., Gibsland.—The North Louisiana Bank is reported organized with \$15,000 capital; business to begin about August 15 with S. W. Smith president; J. T. Boone, J. L. Baker and R. D. Sims vice-presidents, and B. R. Felts cashier.

Md., Govans.—The Govanstown Mutual Building and Loan Association, capital \$650,000, is reported incorporated by Louis Plack, Frank Sofsky, Harry H. Medinger, Charles S. Golding, Hugh J. Gallagher, Samuel L. Collimus, Jacob H. Ammenheuser, Michael P. Kehoe and Charles E. Teale.

Md., Salisbury.—The Peninsular Trust Co. has made application for a charter; capital \$100,000; incorporators, Lewis W. Dorman, Dr. J. McFadden Dick, James T. Truitt, William F. Allen, Marion V. Brewington, William B. Tilghman, Jr., W. K. Leatherbury and Thomas B. Mitchell of Salisbury; R. C. McClelland, Libertytown; John H. Dulaney, Fruitland; Oliver P. Gibson, Crisfield, and Col. Charles T. Leviness, Jr., Baltimore.

Miss., Meridian.—The Mississippi Casualty & Surety Co., capital \$100,000, is reported to have been authorized to begin business; J. A. Bell, H. M. Street and others interested.

Miss., Meridian.—The Meridian Title Guaranty Co., capital \$25,000, has made application for a charter; incorporators, Allen McCants, L. D. Caldwell and others.

N. C., Bailey.—The Bailey Banking Co., capital \$50,000, is reported chartered. C. F. Bissett is one of the stockholders.

Ola., Oklahoma City.—Official: The Home Life Insurance Co. of Oklahoma chartered; capital \$100,000; surplus \$50,000; incorporators, N. L. Linebaugh, F. M. Fry, J. N. Shepler, J. C. Skeen, Claude Miller, H. W. Stover, C. T. Berryman, T. J. Wood, J. R. Alernathy, J. S. Ralston, S. I. Kolb and D. P. Lowry. Business is to begin about October 15. Press dispatches say the officers are Dr. N. L. Linebaugh, president; Dr. J. B. Rollater of Oklahoma City, vice-president; F. M. Fry of Chickasha, secretary-treasurer, and W. L. Gilbert, general counselor.

Ola., Oklahoma City.—The Western Casualty & Guaranty Co. of Oklahoma, capital \$500,000, has been granted a charter; incorporators, J. H. Gaston, S. E. Moss, George Carden and I. J. Willingham of Dallas, Tex.; A. P. Watson of Guthrie and W. E. Taylor of Oklahoma City. This is a conversion of the Southwestern Casualty Insurance Co.

Ola., Vanoss.—The First State Bank of Vanoss has been granted a charter; capital \$10,000; incorporators, J. F. Griffith, E. A. Butt and J. E. McCauley.

S. C., Hartsville.—The Hartsville Realty Loan & Insurance Co. has been chartered with \$20,000 capital; incorporators, C. W. Coker, J. C. Brunson and M. S. McKinnon; officers, C. W. Coker, president; M. S. McKinnon, vice-president; L. Vaughan, secretary-treasurer.

S. C., Little River.—The Bank of Little River is reported to have been granted a commission; capital \$20,000; petitioners, R. R. Stone of Wilmington, Will H. Stone and J. E. Vereen of Little River and Robt. B. Scarborough of Conway.

S. C., Page's Mills.—The Bank of Page's Mills, capital \$10,000, is reported to have been granted a commission; petitioners, D. K. Ford, Hinlary Rogers, Lila Lupe, R. S. Rogers, J. F. Watson of Page's Mills and J. R. Williams of Mullins.

S. C., Spartanburg.—The Security Building and Loan Association chartered; capital \$100,000, with privilege of increasing to \$500,000. J. P. Lee, president; J. P. Felder, vice-president, and W. S. Glenn, secretary and treasurer.

Tenn., Iron City.—Official: The Farmers' Bank of Iron City incorporated; capital \$10,000; incorporators, J. M. Forsythe, J. L. Hall and A. S. Good. Business has begun.

previous item gave the place as Iron City, Ala.

Tenn., Ridgely.—The Bank of Ridgely, capital \$20,000, is reported incorporated by J. T. Foster, R. L. Keating, G. W. Wynn, A. P. Smith and C. H. Hatcher.

Tenn., Santa Fe.—The Bank of Santa Fe, capital \$10,000, is reported incorporated by W. M. Allen, Dr. M. M. Cook, M. E. Allen, Dr. W. T. Walker, A. B. H. Allen, R. C. Elam, W. T. Holland. It is understood that Mr. Holland will be cashier.

Tenn., Theta (Carter's Creek R. F. D. 2).—B. P. Dalton, one of the incorporators, confirms the report that a new bank has been organized.

Tex., El Paso.—The First National Bank has begun business with officers thus: Joshua S. Raynolds, president; Jas. G. McNary, W. L. Tooley, J. M. Raynolds, vice-presidents; Edgar W. Kayser, cashier; W. M. Butler, assistant cashier and auditor; F. B. Gallagher, assistant cashier; T. M. Quebedeaux, assistant cashier in charge of the mail and savings department.

Tex., Franklin.—The Lomas Loan & Security Co. of Franklin, capital \$10,000, is reported incorporated by Robert S. Glass, M. D. Sharp, J. C. Holman and H. S. Morehead.

Tex., Cranfills Gap.—Official: The First Guaranty State Bank chartered and incorporated; capital \$10,000. Business began July 21 with G. O. Bronstad, president; W. T. Tergerson and B. W. Ammons, vice-presidents; O. A. Bronstad, cashier, and O. J. Colwick, director.

Tex., Myra.—The First Guaranty State Bank of Myra, capital \$10,000, Incorporated by J. R. Groves, A. J. Cook and T. P. Rossen.

Tex., Palmer.—The First Guaranty State Bank, capital \$25,000, incorporated by Dr. N. L. Moore, John W. Stacka, A. J. McKeever and others.

Tex., Postoak.—Press reports state that a new bank is being organized.

Tex., Sterling City.—Official: The First National Bank chartered; capital \$60,000. W. L. Foster, president and J. S. Cole, cashier. Business began July 25.

NEW SECURITIES.

Ala., Alexander City.—Reported that an election is to be held August 17 to vote on \$2500 of water-works, \$5500 of sewer and \$4500 of funding-debt bonds.

Ala., Fort Payne.—An ordinance has been prepared providing for the issuing of \$7000 of refunding bonds. Charles M. T. Sawyer is Mayor and H. A. McSpadden Town Clerk.

Ala., Greenville.—Official: July 2 Butler county voted \$155,000 of road bonds. It is expected that about \$50,000 will be offered about September 1. H. D. Lamplrey is County Judge.

Ala., Hartselle.—Official: The election to vote on \$28,000 of 20-year water-works and

electric-light bonds has been postponed from August 8 to August 22, and the rate of interest changed from 6 to 5 per cent.; denomination \$500. Address J. H. Corsbie, Mayor.

Ala., Russellville.—August 8, it is reported, an election is to be held to vote on \$3500 of school-repair bonds.

Ark., Fort Smith.—John W. Morton, secretary of School Board, will receive bids until noon July 30 for \$200,000 of 5 per cent. school-building and equipment bonds.

Fla., Jacksonville.—Reported voted: \$100,000 of 5 per cent. street-improvement bonds.

Fla., Miami.—Reported that the \$75,000 of Dade county 6 per cent. 5-20 year funding and school-building warrants have been awarded as follows: \$25,000 to the Bank of Biscayne, Miami, and \$50,000 to the First National Bank of Miami.

Ala., Mobile.—Bids will be received by Pat J. Lyons, Mayor, until noon August 15 for \$117,000 of 5 per cent. 10-year public-works bonds.

Fla., St. Petersburg.—Press dispatches state that the date of election for voting on \$100,000 of 6 per cent. 30-year water-works, sewer, paving and fire-station bonds has been postponed from July 19 to August 30. J. N. Brown is chairman of the finance committee.

Fla., Tarpon Springs.—Official: Bids will be opened at 4 P. M. August 1 for \$15,000 of 6 per cent. 30-year paving bonds. Address E. V. R. Treatway, N. A. Van Winkle, J. E. Douglas, town trustees.

Ga., Boston.—Official: Bids will be opened August 1 for \$12,000 of 5 per cent. 20-year school-building bonds; denomination \$1000. Address F. C. Jones, treasurer.

Ga., Cairo.—Bids will be received until 4 P. M. July 28 for \$6000 of electric-light and \$2000 of water-works 5 per cent. bonds. Address R. C. Bell, City Attorney.

Ga., Carlton.—Official: Bids for \$5000 of 40-year school-building bonds will be opened August 5 and held open until sold. Address H. W. Huff, Mayor. Bonds were voted July 11; denomination \$1000.

Ga., Elberton.—An election is to be held August 17 to vote on \$25,000 of 5 per cent. street improvement bonds. Address City Clerk.

Ga., Melga.—An official letter says that bond for water-works will soon be issued. J. A. Sasser is Mayor.

Ga., Tifton.—August 17 an election is to be held to vote on \$7500 of water improvement and extension bonds.

Ga., Griffin.—August 23 an election is to be held to vote on \$80,000 of courthouse, \$20,000 of jail and \$50,000 of bridge 5 per cent. Spalding county bonds. W. E. H. Searcy, Jr., is clerk.

Ga., Toccoa.—In addition to the \$19,000 of sewerage bonds to be voted on August 9, vote will also be taken on \$7000 of school bonds. John W. Owen is Mayor.

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